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# WATCH

A PUBLICATION OF THE UNIVERSITY OF WATERLOO RESEARCH + TECHNOLOGY PARK

TODAY'S  
TECHNOLOGY  
PLAYGROUND



# Two Thumbs Up.

Mike Lazaridis talks about what he learned at the University of Waterloo during his co-op experiences and how those lessons influenced his future. Today, his business Research In Motion (RIM) is the largest private industry employer hiring Waterloo co-op students.

## On his first interview experience...

At Needles Hall, it wasn't unusual to overhear the employers chatting. During my first work term interviews I heard a couple employers discussing how impressed they were at the capability and quality of the Waterloo students. Hearing that, I realized co-ops at Waterloo were trained to accomplish a great deal.

## Waterloo the 'teacher'...

Waterloo was hands-on. In the early 80s, I was exposed to leading research and used breakthrough tools like email long before it was widely adopted. I completed assignments on terminals and was exposed to networking, encryption methods, publishing tools, laser printers and all the basic research I would need to help predict the technologies of the future.

## On his first work term...

My first work term was with Control Data – a fast-paced state-of-the-art company. They treated me like a full-time employee and gave me tremendous opportunities to grow. I learned about the industry and was given a chance to use my new knowledge during both my co-op term and beyond. Being given such responsibility really stuck with me. I remembered that later when I started hiring co-ops at my own business.

## On making contacts...

I was self-employed in my last two work terms. UW has been the source of numerous technology start ups – many of which were started by Waterloo professors. Most of the professors worked together as researchers and there was always ongoing collaboration with the campus. Because of the University's close relationships with the tech community, I was able to make the contacts necessary for contract work.

## Applying business lessons...

While a co-op student working at Control Data, I learned two important things. First, when you are operating on the cutting edge you have to develop your own tools. Second, you need to design a product with the future in mind – predicting the components 4-5 years out. These concepts have stayed with RIM over the years.

## On dreaming ahead...

My lessons taught me you don't just dream up a product, you dream up the future. You figure out what will be available, what the market trends will be and what the future might hold for that product. You bet on future technologies. If you can figure this out – you can intercept the marketplace with the dream.

## On building a dream...

BlackBerry is a product of everything I have learned. We dreamed about wireless email that worked on wireless networks across the entire world. Then we sat and wrote what we would need to build this product. We met with Intel to tell them about our dream. Though the technology did not yet exist, Intel came back to us later to say they believed in our vision and would work to support us.

## Remembering co-op lessons...

I understand first hand the many values of co-op. Without co-op I would not have understood the business proposition of looking past the tools you use today and taking a leap to predict what the tools could be tomorrow. At RIM I was able to combine the lessons I learned during my co-op work terms with all the new technologies and research exposure I gained through my Waterloo experience.

## Co-op as an investment...

RIM has always invested in co-op students. We provide our co-ops with incredible challenges and the best equipment possible. RIM starts hiring co-op students in their first and second work terms to create a talent pipeline. We find that by giving students great opportunities to excel, they keep coming back.



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**COVER:** Front cover model Naomi Boehmer is a native to Kitchener-Waterloo. So are her parents. Read more about her on the R + T Park Editor's page. On the back cover, seven year old Kyra Stewart and ten year old cousin Graydon Harris enjoy the day.

The *Research + Technology Park* would like to thank its many partners. These include, amongst others, the federal and provincial governments, the Region of Waterloo, the City of Waterloo, the *University of Waterloo*, and the tenants of the park. These partners have supported Watch magazine since inception. Their involvement has been integral to the success of the park. This magazine acknowledges the achievement of this collective collaboration.

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ideas = research + talent + location



There is a place where ideas happen. It is in surroundings that encourage leading edge research and have continuous access to a stream of brilliant minds. That place is here in Waterloo. It's called the University of Waterloo Research + Technology Park. It's today's technology playground.

The companies located in this park have ready access to everything they need to generate ideas for now and for the next generation. Tomorrow they will welcome the brainpower of our children just as they have already welcomed the minds here now. Watch to see what happens next.

today's  
technology  
playground



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WATCH

R+T PARK

03

## R+T PARK EDITOR'S LETTER

WELCOME TO WATCH MAGAZINE 2009



Carol Stewart  
UW Research + Technology Park

Since our last issue, a lot has happened. The world felt the first breath of new hope for the future with the election of Barack Obama, while almost simultaneously, eyes and ears circling the globe were rocked to the core by recent economic happenings. We have all relearned – intimately – that a delicate interconnectedness creates the checks and balances that keep our lives and our environment steady.

Our front cover picture of Naomi Boehmer represents many things - the unlimited potential of youth, our hopes for an ecologically sound future and the recognition that indeed, we still live in a very beautiful world. Naomi is 12 years old and her dreams for the future include seeing that world.

Naomi's mother, Colleen, is an English graduate from St. Jerome's college. Her father, Kevin, is a graduate from the *University of Waterloo* with a BA in Environmental Studies and an MA in Planning. Kevin has spent his entire career in the environmental sector and currently works on setting national and international environmental standards for business, government and civil society.

While Naomi dreams of one day seeing the world, her father is one of many working to ensure the world will offer as much to Naomi tomorrow as it does today. Lucky for her, there are many more across the globe intent on doing the same thing. You will meet some of the others in this issue. You will see stories from people both inside and outside the park doing work locally that has impact extending far beyond.

Watch also contains some thought provoking opinions that don't shy away from hard truths. One of the responsibilities of a research park is to be aware and open-eyed; this is a place where people tackle risk head-on and put the "easy" aside. The inclination when times are tough is to turn a blind eye, but

we can't do that. We have to let those in-the-know pose the questions even if those questions make us uncomfortable. It is up to us to take research and academics to market through business models that will invest in the answers.

The *Research + Technology Park* enjoys many collaborations with those whose work includes a positive view of the future. People such as Adrian Conrad, who has recently built the area's first Gold LEED rated multi-tenant building, and Sherryl Petricevic, whose work helps students find their pathways in life, and *Energent*, a company focused on prudent energy usage reduction. All the profiles and columns in this issue are about more than just a business or a person; they are about people making a substantial difference in our world. They are about people creating balance.

Perhaps one day that balance will include a vista of windmills that augment traditional energy resources and green roofs as a matter of course on all new buildings. The *Research Park* is a technology playground where research, technology and business dovetail into the solutions for tomorrow's world. For Naomi's world. ■

# INSIDE GOOGLE WATERLOO



Steven Woods is a successful and time-proven entrepreneur; he is also exactly the kind of person that fits the *Google* profile.

Approached by *Google* in 2007, Steven was very busy with his own start-up, *Neoedge Networks*, in Mountain View, California. *Google* talked and he listened, but he wasn't ready for a move. *Google* kept him on their list of potential employees and made sure to continue touching base with him on a regular basis with the goal to one day bring him on board. Eventually, one of their calls piqued his interest. It was about their new Waterloo location.

"I had my own ties to the region and when they started talking about Waterloo I became very interested," explains Steven. "The evolution of the technology industry in Canada

is powerfully alluring and this location sounded like it would have a very entrepreneurial eye. As an entrepreneur, I found that intriguing."

In 2008 Steven joined *Google* as Director of their Waterloo location, and today he manages all the projects within the office. With his successful start-up track record, he is also very well qualified to spot and leverage new opportunities.

As always with *Google*, those outside are keenly interested in what is happening within their walls. Steve spoke with "Watch" magazine and answered some questions.

## Q. WHY WATERLOO FOR *GOOGLE*?

A. As a world-wide company, *Google* wanted the expansion of their office locations to reflect a world-wide perspective. In the market for an engineering location, they considered a few different Canadian options.

*Google* has had a presence in Waterloo since 2006 and moved into its new office in 2007. The company already had a long and successful history with the area via recruitment of many of their highly qualified engineers. Turns out, a lot of successful people at *Google* came from Waterloo. This region has grown into a centre for Canadian technology and innovation with companies located all over the area. With the *Research + Technology Park*, the *Accelerator Centre* and all the start-ups it seemed absolutely the right place to build a facility.

## Q. WHAT DO *GOOGLE* PEOPLE DO HERE?

A. We deliver billions of ads to the world daily. Getting the right ad in the right spot fast is what makes ads relevant to consumers. Our AdSense group is focused on the system that matches consumers to ads.

"We operate in a state of constant improvement."

We also work on mobile projects—these include *Google* apps like mobile Gmail, calendar, searches and many more. Our mobile search engine has a lot of impact world-wide on the overall mobile *Google* experience.

And we are always looking at new projects and new ideas. We operate in a state of constant improvement. We have our older, more traditional products and then we are always on the lookout for new experiences.

## Q. WHAT MAKES A *GOOGLE* IDEA WORK?

A. The key to what makes a *Google* idea work is hard to define. What we usually do first, is ask if the idea is "Googly." If it feels like it is, we look to our mission "Do no evil" to see if the idea follows the same path. If it does, we think about whether the idea will improve the company. Then we question the idea on its impact over time. We try to use thought for every decision to really think beyond the "now." And always, we try to determine if the idea is the "right thing to do." We apply this concept and philosophy to everything.

"Everyone is encouraged to talk about their ideas and decisions."

I'll use an example. We have bottled water in this location. *Google* believes that everyone working in a *Google* office has the right to think and the right to make a decision. At the same time, we understand the impact of drinking bottled water. So, what we did was move the refrigeration unit for the bottled water farther away. We left people with the right to choose bottled water, but we made it more convenient for them to help themselves to the water cooler.

Everyone is encouraged to talk about their ideas and decisions. We have noon speakers who are as often people from within our office as they are from the company world-wide.

It is also very true that we have a policy that everyone spends 20% of their work time on their own projects of interest. That is a constant pipeline for new ideas and in many cases has direct positive impacts on our community. ■



# BUILDING A BETTER WORLD



Canada is a land rich in natural resources: trees, water, rocks, and space. Finding the room for our built environment and the necessary materials may be easy, but as we grapple with ever-increasing environmental challenges, our world will soon demand we look beyond sheer ease. The consequences of a 'business as usual' attitude will soon be absolutely out of the question.

**A shift will happen.**

Local developer Adrian Conrad is an individual who is more than talking about a new business model; he is actually doing it. Explains Adrian, "Our environmental problems are not going away. I have two young children, and I asked myself what I was leaving behind for them. I realized it was important to leave a smaller footprint in what I do in order to leave a better world for them. Rather than wait until the situation was completely out of control, I want to do what I can now to raise the bar in my building practices."

Adrian took this philosophy to heart blazing a path for environmental and sustainable construction. "Once I realized building better was important," says Adrian, "I decided I had an opportunity to be a leader and an innovator. Someone needed to drive the movement. Whether I was successful at it or not, I knew no one could take away from me being the first to at least try. So I did." The first building he tackled in partnership with the *CORA Group* was the *Accelerator Building* located in the *Research + Technology Park*.

Adrian explains, "What I learned building the *Accelerator Building* was that the 'simple' really matters. For example, knowing that standard construction generates a lot of waste, I learned that an organized jobsite could facilitate recycling during the construction process. I did that with the *InnoTECH Building* and found this was one easy way to reduce waste and make an incredible difference."

This is only one of the many practices Adrian put into place with the *Accelerator Building*. Attention was also paid to energy consumption, water drainage as well providing a healthy building for tenants.

Walking in and around the building, things that are different literally jump out to the eye including the plants on the green-roof that are visible from the ground.

After successful completion of his first sustainable project, Adrian continued this approach in his second endeavour at the park, the *InnoTECH Building*. With this building, Adrian decided he wanted to explore more extensive environmental building options.

Adrian turned to the Leadership in Energy and Environmental Design (LEED) rating system for guidance. LEED construction begins with a suite of standards for environmental construction. Developers choose which options they want to build with, and LEED has a point system based on those choices which is used to attribute the designation. Options centre on energy efficiency, water efficiency, site and material efficiency and indoor environmental features. Completed in early 2009, *InnoTECH* is expected to be the first multi-tenant LEED Gold rated building in the region.

**"I want to do what I can now to raise the bar in my building practices."**

Sustainable building practices take longer and cost about 10% more. For Adrian, however, the driver for building this way was never money. He explains, "I believe making decisions based on money alone carries a price. Building for long-term sustainability and health benefits may not fully be on people's minds yet, but in 5 – 10 years they will. Hopefully what I do will inspire others to follow suit and make tenants ask questions."

Now that his second building is complete, Adrian is well into planning for his third. With a long track record of building for the community, his decision to continue in the park is intentional. "I knew the park was where I wanted to develop," says Adrian. "First of all, there is an advantage for tenants when you have more than one building in a complex. Secondly, I have a great relationship and strong comfort level with the technology community—I want to be here."

Native to the area, his father Manfred Conrad started the *CORA Group* in the late 70s. Adrian first entered the building field through real estate, selling houses part-time while attending university. After completing his MBA, Adrian joined his father with *CORA Group*. In 2000 he and *CORA Group* built his first project for the technology community, the *Waterloo Technology Campus*.

For Adrian, there really was no other option for his career. "I never really considered doing anything else," he explains. "I'm a big picture person—I like dealing with people and complex situations and I get to create things. Getting to do this in such a forward-thinking community with such tremendous growth potential is amazing."

"In fact, I remember back when I was doing my MBA in 98/99," he continues, "Jim Balsillie gave me my first BlackBerry. It was a great device to show off—except that I had no reception in Kingston. Now we run our customer service request and preventative maintenance programs on BlackBerries. Things have come a long way."

With future-based thinking individuals such as Adrian Conrad taking the first steps toward environmental building practices, it's easy to imagine where things may go from here. ■

Following the success of the *Accelerator Building*, the *CORA Group* increased its commitment to sustainable environmental design with the *InnoTECH Building*. The building will offer a wide range of environmentally friendly design and "smart-construction" features.

## INDOOR ENVIRONMENTAL FEATURES

- Raised floors
- Occupant air control
- Carbon dioxide monitoring and pressurized air system
- Environmentally friendly products
- 'Flex wall' system for convenient space arrangement

## ENERGY EFFICIENCY

- Advanced building-automation to save on power and gas consumption
- No CFC-based refrigerants
- Maximum insulation to control heat gain and loss
- Motion-activated lighting to save energy

## WATER EFFICIENCY

- Rainwater harvested for rest-rooms
- Low-flow plumbing fixtures
- Adaptable, drought-resistant native-species plants require little if any irrigation
- Naturalized landscape cleanses overland water-flow before storm system entry

## SITE AND MATERIAL EFFICIENCY

- Construction waste diverted from regional landfill sites
- Recycled content used in construction materials
- Reflective roof minimizes 'heat island effect' and reduces cooling costs
- Amenities support alternate transportation to the automobile

# THINGS LOOK DIFFERENT FROM THE SKY

“When we knew we were moving forward with the *Accelerator Building*, we wanted to make sure both our building approach and the building itself would incorporate environmentally sustainable aspects. We sat down with our team and the architect for the building and came up with lots of ideas for a sustainable building. One of the elements we considered was a green roof. When the building opened in 2006, it had the 2nd largest green roof in Canada.”

~ Adrian Conrad, Developer

## FRIENDLY FACTS

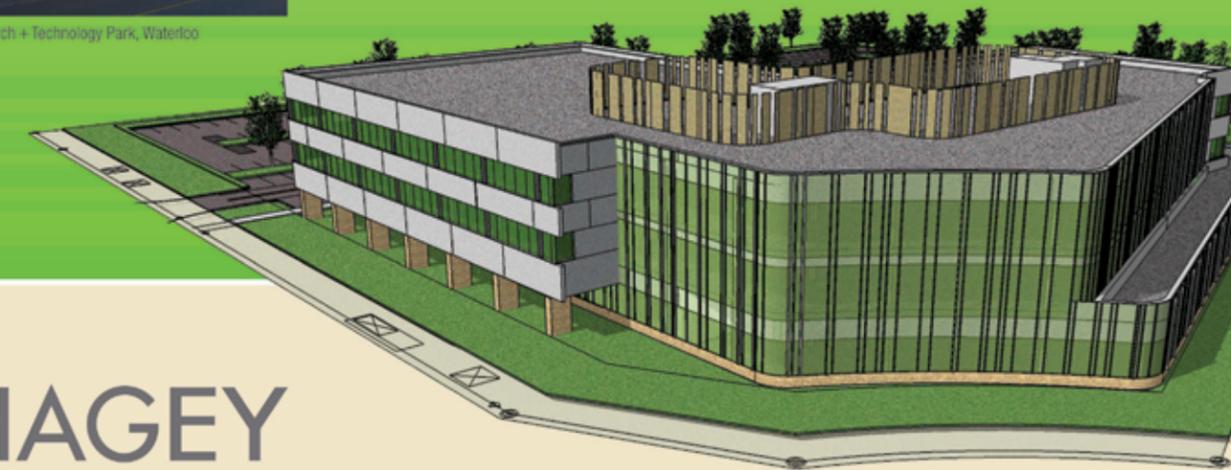
- 23,000 of the 30,000-square-foot roof is covered in plants.
- There are only about 15 centimetres of growing medium across the inside portions of the roof.
- There are 14 different varieties of sedum—which are low growing, fleshy leaf, and drought resistant plants. Eventually they will cover the entire surface.
- Soil depth around the perimeter rises to up to 40 centimetres.
- The perimeter is planted with 10 different native and non-native grasses.
- These grasses can be seen from ground level.
- In the summer the roof keeps things cooler, reducing the need for air-conditioning.
- It acts as an informal storm management system. The growing medium holds the rainwater, which is then taken up by the plants or directly evaporated back into the atmosphere.



InnoTECH Building • Research + Technology Park, Waterloo



Accelerator Building • Research + Technology Park, Waterloo



375 HAGEY  
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## The Cora Group's newest addition to in the University of Waterloo's Research + Technology Park!

The Cora Group's innoTECH Building and development of the Accelerator Building in the University of Waterloo's Research + Technology Park set the standard for "smart-green" buildings in the Region. We continue this cutting-edge and sustainable environmental design with our new 375 Hagey Boulevard. Its indoor environment will feature raised flooring with convenient access to cabling, wiring and air ducts that provide unsurpassed control of workspace climates with in-floor ventilation systems. Specialized insulation, advanced building-envelope design, advanced automated electrical systems, and motion-activated indirect lighting are just some of the energy conservation features.

Other examples of our green efforts include a rooftop water harvesting system for use in restroom facilities, and naturalization of the landscaping to filter overland water flow. As a state-of-the-art environmentally "smart-green" building, 375 Hagey Boulevard is a LEED-certification candidate. 375 Hagey Boulevard is indicative of The Cora Group's continued investment in the future of our community.

The Cora Group is Waterloo Region's leading multi-tenant sustainable building developer providing space for today's technology and office industry.

For more information please contact:

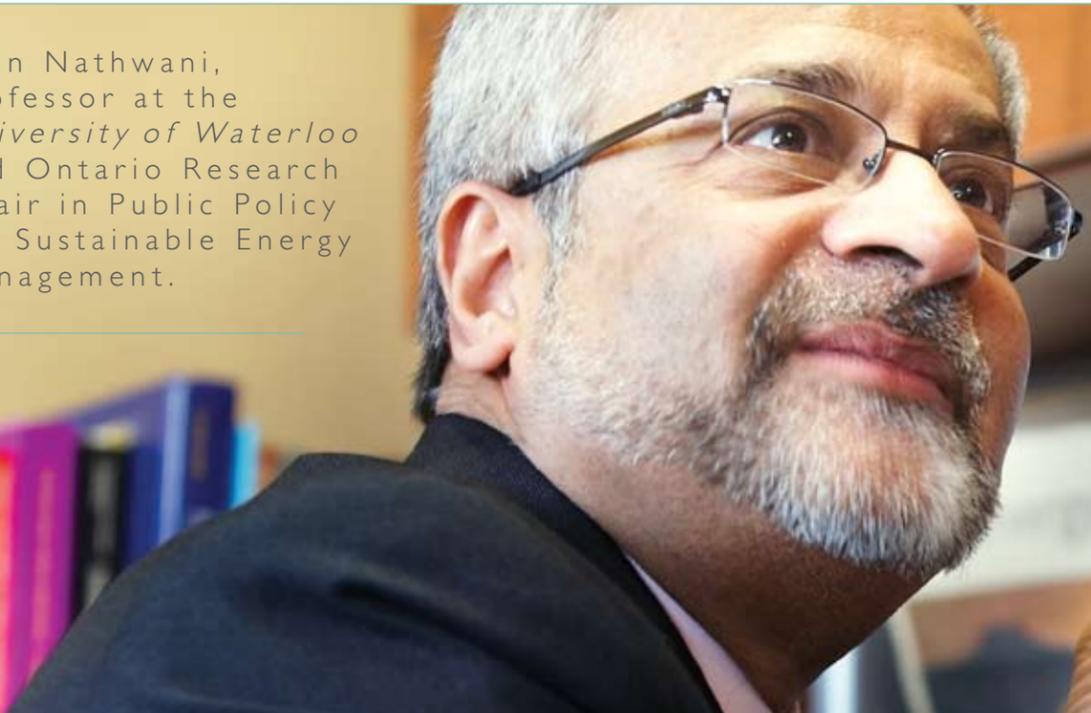
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# SMART GRID

REDUCES CARBON FOOTPRINT  
AND DRIVES ECONOMIC GROWTH

Jatin Nathwani,  
Professor at the  
*University of Waterloo*  
and Ontario Research  
Chair in Public Policy  
for Sustainable Energy  
Management.



Dr. Jatin Nathwani believes that the complexities of our problems require an equal multiplicity of answers. Looking at energy through the lens of diversity may be the key to getting beyond just talk. Dr. Nathwani pens his thoughts in a recent article.

The current global financial crisis provides an unintended but timely opportunity to change the lens through which we view Ontario and Canada's power sector.

Reliable and affordable electricity has been at the root of our economic strength in the past. The next chapter in the evolution is the creation of a "smart grid" – primarily to allow access to the power system not envisaged before and to benefit from it in ways only access to digital information and today's control technologies can provide. The vision is a modern, much-improved and reliable electric grid that is secure, cost-effective and a driver of economic growth.

Developing a smart grid can be a powerful way to help reduce the overall carbon footprint through a major shift away from fossil fuels in transportation to electric mobility. It can also be an enabler of economic opportunity through access to multiple sources of energy, small and large.

Imagine the residential solar roof providing much-needed relief to the power system by reducing the air-conditioning load at peak times in the summer. Or in-home displays that give consumers access to their electricity consumption to help them control energy costs. Providing utilities with new tools for safe and rapid integration of dispersed renewable energy resources (i.e. solar, wind, water, waste or bioenergy) is another benefit. The communication technologies that would form the backbone of a smart grid also allow better use of assets to reduce cost and improve the ability to respond to storms and emergencies.

Investment in the electric grid is too often seen as a burden on public funds, rather than a fundamental investment in our future prosperity. By making the right choices now, we can lay the groundwork for a decarbonized power sector. The refurbishment of the aging generation and transmission infrastructure is an opportunity to replenish and innovate.

A smart grid can do much more than manage energy demand; it allows renewable power to play a much larger role in the electricity mix, and through rapid integration of power generation from many small distributed sources, we open the door to revolutionizing the way we think about power production and distribution at the local level.

**“By making the right choices now, we can lay the groundwork for a decarbonized power sector.”**

Imagine if every family could store power in their car batteries at night when it is cheap, drive to work on that stored energy derived from wind, recharge at a solar roof at the parking lot and feed power back to the grid at times when demand is high. Here, the smart grid coincides with one of the most important trends emerging in our society: the desire to decouple our transportation sector from its reliance on fossil fuels.

The first mass-market plug-in electric cars and hybrids are set to arrive in about two years. While the initial costs may be high, the necessary innovation is occurring at a rapid pace. Over time, an increase in scale, wider adoption in the marketplace and resolution of early problems will result in lower prices.

Building a smart grid is one way to make Ontario a leader in sustainable growth and in the process give rise to a clean technology industry. Getting there, however, will require large investments that cannot be put off even in tough economic times.

A far greater challenge, however, resides in our collective inability to overcome the social and institutional barriers that stand in the way of timely implementation of projects. Reducing legal and regulatory barriers to effective deployment of infrastructure projects will take political will.

The building of new generation or transmission facilities is too often ambushed by interest groups during the siting and approvals process. Interminable interventions end up defeating the best of policy intentions, narrowing the focus and limiting the debate to a consideration of bare minimum requirements.

Our capacity to expand aggressively and to utilize distant, often remote but renewable sources of energy will be severely constrained if land use and approval issues are not clearly settled early in the process. This will require targeted policy initiatives and changes to the regulatory frameworks. A broader change in public sentiment more receptive to energy projects will also have to be part of the dialogue.

Many groups opposed to development of new production facilities or transmission lines view the energy sector not as an engine of economic development but as a necessary evil. They distrust any expansion, and focus solely on

energy efficiency and conservation as a panacea to the problems of the energy sector.

It is clear that the most cost-effective first step is to improve energy efficiency at all steps in the chain – from conversion to customer. This should command high priority. But efficiency improvements alone will not preclude the need for investment in our energy infrastructure. Demand for electricity is likely to increase in the long term, and conservation and efficiency programs are not a substitute for increased capacity.

Sustainability does not mean building a grid with the smallest capacity feasible. Abundant supply of low-cost, reliable power has brought untold investment in Ontario. For the future, we need to build a grid that is smart and green, but not necessarily lean and constrained.

Excess capacity need not go to waste; instead, we can sell new, sustainable sources of power to U.S. markets and make Ontario a continental hub for clean energy. The goal should be to move the Ontario electricity sector back to a position in which it can play a major role in regional electricity trade through interconnections with neighbouring provinces and states. A minimalist approach that dampens innovation and fails to acknowledge the high value of electricity is not appropriate for the times.

**“This means we must be prepared to think big, build smart and remain resolute.”**

The role of electricity as the primary agent of economic prosperity and social well-being is rarely acknowledged in energy policy debates. We need to think of abundant, reliable electricity as the wick that draws investments for economic development. This means we must be prepared to think big, build smart and remain resolute. If it turns out that the investment is on the side of more rather than less, then the legacy bestowed upon future generations of a high-quality infrastructure is an outcome of little regret. ■



# ENERGY: USING LESS NOW



Gord Ellis

Norm Malloch

The depletion of fossil fuels has made energy conservation a prime concern. While the world awaits the discovery of a suitable replacement for traditional energy sources and as costs continue to escalate, companies' efforts are increasingly focused on prudent energy usage.

**But how exactly do you take something traditionally viewed as a fixed cost and save money? Part of the answer is technology, and the other half is people.**

Norm Malloch, along with partner Gord Ellis, started *Energent* on the premise that saving money on energy costs is a gain that most businesses aren't equipped to recoup. Located in the *Research + Technology Park*, their company helps organizations use technology to track and measure energy usage and make changes to energy consumption. The process introduces energy-saving ideas not unlike the "Tips and Tricks" energy companies provide for households except for a far more complex and larger-scale environment.

Explains Norm, "It's called energy management. Generations ago, energy usage was viewed as a controllable cost. Many companies even had a VP of Electricity. By measuring how much was used when, companies could save dollars. In more recent decades, energy costs dropped along with the concept of measuring usage. The focus moved to the demand side—getting enough energy out there. That is important, but in light of world energy issues it is now not enough."

Every industry has complex and individualized needs; *Energent* enables intelligent use of energy for businesses by helping organizations manage their own individual energy cycle. The first step entails collection of consumption data via technology. What brings about change is looking at that usage data in relation to business operations and production. Once usage data is collected and analyzed, revealing the information to decision-makers helps them make more effective and efficient choices with energy.

"When people look at the data, they begin to see patterns. That's when the light bulb goes on. Their natural curiosity combined with their understanding of their own organization inspires them to find ways to capture their energy costs based on the trends they see in their usage," explains Norm.

**"...helps them make more effective and efficient choices..."**

Savvy companies are taking a more than a second look at the proposition. *Energent's* software tools take the data from meters to preserved energy. Delivered via the internet, the analysis software begins with real-time energy use information. Energy analysts provide ongoing support to ensure the client's individualized energy information is maintained over time and as operating conditions change. Information is delivered back to the client via the internet.

In Ontario, the Power Authority has created incentive programs not just on the overall usage of energy, but usage during peak times. Explains Gord, "Electrical costs are both how much energy is used and the times it is used. During peak hour usage, there are charges. By looking at the peaks and trying to control and minimize usage relative to production during those peak times, companies can actually save

significantly both with reduced peak energy charges and through incentives. But you have to know what is going on first."

Most businesses don't have the resources to run their own system. *Energent's* solution means systems are automated and maintained

**"...there is a lot of energy waste—150 billion dollars per year. We want to help all of our customers capture that back..."**

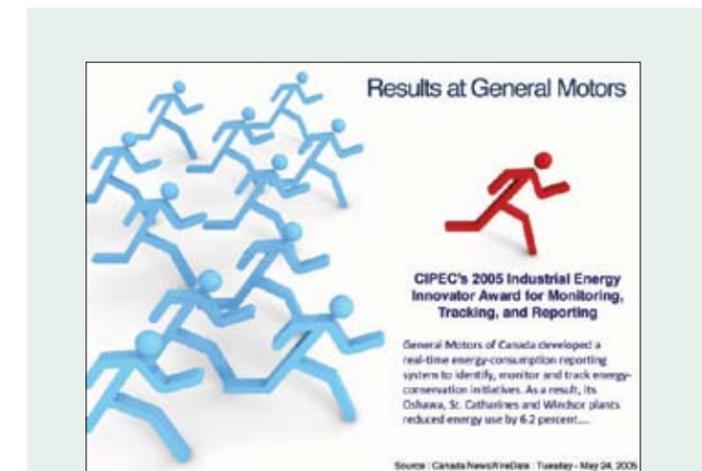
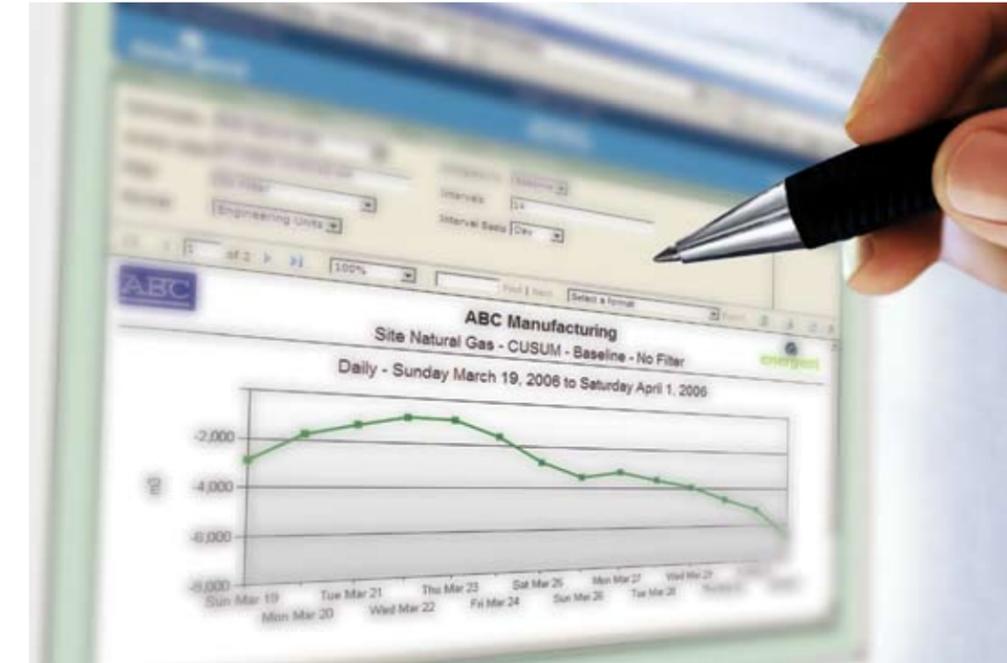
by staff with equipment located at *Energent's* data centre. By accessing services via the internet, businesses avoid the capital and resource-constraints of running their own energy management system. The end result is clients have access to cost-effective, meaningful and customized energy information allowing them to make effective decisions to manage and reduce energy use. Every dollar not spent on consumption impacts their bottom line.

"There are usually some very quick wins when a company comes on board. People immediately analyze their systems and processes to see how well they are doing already—then they improve. That's mostly about behavioural changes. After that, the focus moves to larger incentives. By measuring the changes, organizations can use that information for energy rebates, extrapolate costs into the future and make contract buys at a fixed price."

And the future? "We've recently taken on a new and very special project," explains Gord. "It's called The Energy Hub Management System, and it was developed in partnership with the *University of Waterloo*. This project will help Ontario homeowners and businesses take ownership of their energy needs while reducing costs and impact on the energy grid. It's a smart web-based tool that will actually give consumers the control to change the way they use energy."

Funded through the Provincial government, other partners on the project include *Hydro One* and *Milton Hydro Distribution Inc.* The 3-year project is part of *Energent's* longer term vision to reduce overall energy usage. *Energent* will be the primary commercialization entity for the outcome of the project.

"In North America there is a lot of energy waste—150 billion dollars per year. We want to help all of our customers capture that back through both savings and conservation efforts," clarifies Gord. "We're all working together for the same cause: reduction of energy consumption, alternative energy sources and new storage resources. It's a fine world. We want to do what we can at *Energent* to keep it that way." ■



*Energent* worked in close collaboration with *General Motors of Canada Limited* to develop a real-time, web-based energy informatics platform which was deployed in all their Canadian plants. Through continued use of this system GM was able to reduce its energy consumption by 6.2% per year and greenhouse gas emissions by 2.6%.

*Photo above:* *Energent* charting tool allows operations personnel to rapidly assess the efficiency impact of operational changes.

# BRIGHT IDEAS AND BUSINESS BASICS

THE CARE AND GROWTH OF AN ENTREPRENEUR



Not yet 30, the enthusiastic 12 year old is still very much evident in the man Kurtis McBride is today. From raising mice in his parents' house to running his own company his passion for an entrepreneurial life is clear.

**At 12 years of age Kurtis McBride embarked upon his first entrepreneurial venture: raising mice in his parents' basement. Selling the mice to the local pet shop for a tidy per mouse profit of 50 cents, Kurtis' business grew exponentially until the volume of mice finally exceeded his parents' patience. They shut him down.**

Nearly 15 years later, Kurtis was in business for himself once again.

Being his own boss was not something Kurtis actively thought about. He explains, "When I considered my future, I always figured I would be middle-management in a big company." This was not to be. When Kurtis entered his 4th year in the Systems Design Engineering program at the *University of Waterloo*, he happened upon an idea he would nurture along during the completion of both his undergraduate and Masters degrees. Eventually, this idea evolved into *Miovision*.

**Kurtis "...grabbed a couple friends and said 'let's start a company.'"**

"The idea came to me during one of my co-op work terms. To earn extra money I took some work as one of those guys standing at an intersection counting cars. During eight hour weekend shifts – through all kinds of rotten weather – I convinced myself there had to be a better way to do this."

That 'better way to do this' became Kurtis' 4th year engineering project. Pulling together five other students, Kurtis embarked on a project to write software that was capable of converting digital traffic recordings into data. Utilizing computer vision (object tracking) and video sequencing (locking onto and following an object), he believed data could be analyzed far more economically and efficiently than with manual methods. Virtually an untouched arena, Kurtis capitalized on this market gap as his signature MA project.

While working on the project, Kurtis "...grabbed a couple friends and said 'let's start a company.'" Together with Kevin Madill and Tony Brijpaul, the three launched *Miovision* while Kurtis was still completing his MA. The company quickly became cash-flow positive.

One Masters degree and a year later, the three partners took a hard look at their business and determined it made sense to move the company out of the consulting field. Their goal: To choose a market vertical and develop a product. Narrowing their interest to traffic, they saw great potential in the smaller market of 'counting cars'. In the years that had passed since Kurtis' days counting cars, the field still remained manual.

"In theory there are two ways to start a hi-tech company. Raise money and pretend to be massive or find a small high margin niche as a base to build a company," recalls Kurtis regarding their decision to pursue traffic.

In March of 2006, Kurtis moved his young company into the *Research + Technology Park's Accelerator Centre*. The decision to relocate the company happened to coincide with the leap to become a product company. But in order

to see this vision through, their consulting work and the revenue associated with it had to stop. They finished their contracts and, with a small-scale staff of seven and a small amount of financing, stretched their funds to last an entire year to free the team's time for product development.

They had several challenges to conquer. Using a camera to digitally record traffic flow, the electronic data would have to be converted to identify what was actually a 'car' and exactly what that car was doing. Foreground images like pedestrian traffic and weather patterns like cloud cover, snow and rain made it difficult to differentiate what was background – and what was car.

Says Kurtis, "Think of how humans see and how the eye works. When we look at something, a signal is sent to our brain to digest what it is we are seeing. We understand what is a car or what is a pedestrian or what is a cloud. The software had to do just that."

When their year was up the team had their product and two beta customers. It turned out there was 'a better way' just as Kurtis thought all those years ago. Their method of digitally counting cars and analyzing data indeed turned out to be more efficient and effective than traditional methods. The video/web based technology helped reduce the cost of collecting, analyzing and reporting accurate traffic data by replacing manual traffic data collection with an automated turning and movement count system. Transportation companies and municipalities constrained by the cost of people management now had a new option.

Twelve months later, their two inaugural beta customers had grown to 40. At the end of 2008 Kurtis relocated *Miovision* to a new and larger facility. Their numbers had grown faster than anticipated and they had held off on a move as long as possible. But when visions of a hardware product appeared on the horizon, Kurtis realized it was the right time for a move.

**"The best thing I learned was... we had to remain focused early on."**

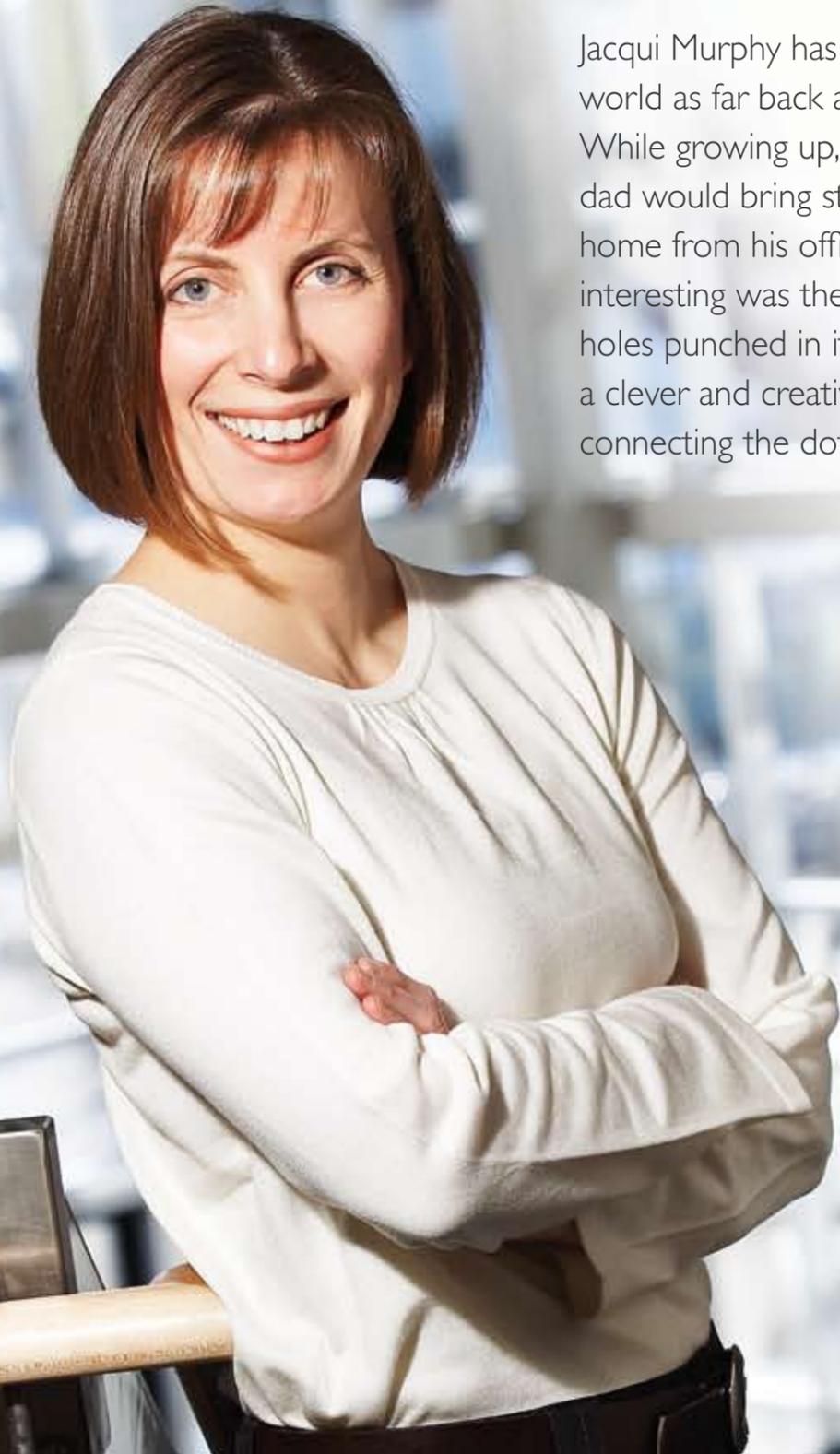
Where other companies worked on several products at once, Kurtis held back on expansion until their first endeavour proved fruitful. "I learned my lessons early on. Due to the small pool of money we had to learn quickly and cheaply. The best thing I learned was that those who begin with a larger pool of money have the urge to do as many things as they can and end up burning through the money fast. With too much money, you don't learn your lesson until you're broke. Since we didn't have a lot of funding, we had to remain focused early on."

"Eventually we found ourselves at a point where—in order to reach greater heights—we needed to design the hardware ourselves. Initially we lacked the experience and expertise to build the product ourselves. But over time as

▶ continued on p. 18



# JACQUI MURPHY: CONNECTING THE DOTS



Jacqui Murphy has been a part of the tech world as far back as she can remember. While growing up, she recalls that her dad would bring stacks of computer cards home from his office. What she found interesting was the fact that each card had holes punched in it. Instinctively, she found a clever and creative use for these cards: connecting the dots.

Today, with a prior track record that marks an incredible career in high tech, Jacqui Murphy is on an upward trajectory. Her pathway to success has been a combination of tenacity, plain hard work, and an inherent ability to 'connect the dots' of opportunity.

**THE EARLY YEARS...** Jacqui grew up with a software developer dad and artistically-inclined, teacher mom.

Looking back, Jacqui acknowledges her exposure to both creative and analytical influences made some decisions in her life challenging.

Explains Jacqui, "I had a hard time choosing between the Ontario College of Art and business school. I liked them both. In the end, my dad helped me with the decision. He pointed out that while I could go to business school and do art on the side it would be difficult to do things the other way around."

**"Marketing let me apply my artistic side to business problems."**

Lucky for her, she discovered the perfect marriage of her interests while at business school: Marketing. "It was like lightning struck," says Jacqui. "I found something that combined both worlds. Marketing let me apply my artistic side to business problems. Every aspect of the world of business could have creative elements. I was hooked."

But as Jacqui also found out, "I loved marketing but I wasn't interested in consumer-packaged goods avenues. What I found most compelling were the technology business cases. They were few and far between but when they came along I embraced them. At that time, marketing and technology working together were a new frontier. Out of my entire graduation class only two of us set our sites on a career in high tech."

Upon graduation Jacqui also learned that job postings for a marketing career in technology were scarce. Tech was just not there yet. So in the interim, she took a position teaching at the Ivey School of Business.

**BUILDING IN BETWEEN...** "Although I ended up teaching – tech stayed in my blood," says Jacqui.

Always on the lookout for tech opportunities, she read an intriguing article in the newspaper about a marketing firm called *Taaz*. Located in Waterloo, the company catered exclusively to the high tech field. "Once I read the article I decided I had to work there. So basically, I stalked the firm," laughs Jacqui.

Applying to the company three different times, her dream job remained elusive. Most disheartening was a question she was asked in her third interview: "Who do you know?" Her answer at the time was "No one." That answer cost her the job.

For some that might have been the end of things. But for Jacqui, it merely meant new tactics. The first thing she vowed was that never again would lack of a network prevent her from getting a job. The second was that she would get a job at *Taaz*.

Re-inspired, Jacqui attended a trade show at which her sister was hosting a booth. Coincidentally, the booth just in front happened to be sponsored by none other than *Taaz*. Putting herself out there, she introduced herself to Kevin Stumps from *Taaz*. The encounter left an impression that finally led to 'Job #1' in her targeted field.

After two years with *Taaz*, Jacqui made the move to *PixStream*. Shortly after the move, *Cisco Systems* acquired *PixStream*. Jacqui worked with a team to dismantle what she had been a part of building during her years at *PixStream*. It was 2001, and Jacqui was back on the job hunt.

**HOW SHE GOT TO NOW...** With the skills, experience and network she had accumulated, Jacqui's search for her next opportunity was a more interesting proposition. "*Taaz* was the place where I think I met everyone in the tech field," explains Jacqui. "One thing just seemed to lead to another. With the connections I made through *PixStream*, I had a broad range of possibilities. I was able to take a good look around before making a decision."

While exploring her options, Jacqui was approached by Tim Jackson, former CEO of *PixStream*, and Andrew Abouchar. The two of them had started their own venture, *Tech Capital Partners*, a venture capital firm focused on investments within the technology sector. Tim and Andrew recognized that they needed marketing assistance and Jacqui was the person they wanted.

True to her pattern, while in job search mode Jacqui added a new connection to her life. "Just as I was about to talk to Tim, I found out I was pregnant with my first child. When I met him that was the first thing I said. Without missing a beat, Tim responded 'Great. Let me tell you about this job.' Then he said—'Wait—that is fantastic! This is a great time in your life.' Then he told me about the job."

The day after the meeting, the partners left a gift on her chair at *Cisco*: A mother and childcare book. They hired her.

**"At Tech Capital we invest in more than just technology or ideas. We watch for chemistry—within the company itself and in the relationship we develop with them."**

Jacqui's initial role at the firm was in an operational capacity with efforts focused on helping portfolio companies get to market quickly. She soon moved to a more comprehensive role adding investment management, IP and marketing to her suite of responsibilities. In 2005 she was made Associate Vice President, and in 2008, Jacqui became a partner in the firm.

"At *Tech Capital* we invest in more than just technology or ideas. We watch for chemistry—within the company itself and in the relationship we develop with them. ▶



Our due diligence takes into account who makes up the start up, what the competitive value proposition is, and if there is an industry pain requiring a solution. Our preference is to start talking to companies in the early days. There are certain patterns with start-ups, and we're often able to identify

the risk factors early on. The goal is to mitigate risk while increasing the possibility of return on typically 'high risk' start-up ventures."

**WORKING ABOUT TOWN...** Working at *Tech Capital*, Jacqui is in contact with almost every company or organization along the path of a start-up. That includes organizations like *IRAP*, *OCE* and the *Accelerator Centre* which specifically supports early stage entrepreneurs, local universities, local tech organization *Communitech* and everything in between.

"What's great about this area is that we're all collected together," explains Jacqui. "All you have to do is point down the street at the *Research + Technology Park* to see a physical manifestation of technology. It is a dedicated space that exists to support technology companies. You can't walk there without bumping into and starting a conversation with a tech CEO, or David Johnston, or a young entrepreneur."

"People on the fringes make sure everyone is part of this technology eco-system. Outsiders point to this community and ask 'How did you do this?' 20 years of collaboration is what formed this incredible technology infrastructure connecting us to each other."

Jacqui understands such connections intimately. In 2008 she won the *Communitech* 'Community Impact Award' which recognizes leaders at the forefront of technology. Says Jacqui, "When I accepted my award I looked around the audience and thought—I know this room. I had worked with just about everyone—they had all been involved in my journey."

On a journey of her own making, Jacqui continues to challenge the boundaries of new worlds. As one of the few females in the country in the venture capital business, it is likely she will be connecting an entirely new string of dots. Keep your ears open; you'll be hearing more about Jacqui Murphy. ■



we became more and more involved, it seemed a logical progression to develop the expertise with the procurement and manufacturing process in-house."

A gracious individual, Kurtis acknowledges the company's success is truly a team effort. He is quick to attribute their

aggressive growth to several factors including marketing and job execution.

All of the partners are heavily involved in the company and determine their roles based on what they do best. For the rest, they hire to fill the gap. Kurtis intuitively recognizes when it is time to move on. Of his own contribution he explains, "I'm a bit of a bull in a china shop. It's my job to find all of the pieces. I make a mess, set the stage, and move on. I do what has to be done and when the timing is right, we hire someone else to continue where I left off. So far, they all seem to do a better job than I do!"

**"Someone took the time to help me...so I'm committed to helping those just out of the gate."**

Just as he had mentors throughout his venture, Kurtis finds great satisfaction in providing mentorship for the up and coming. Someone took the time to help me along the way. I recognize I can't give back to those who helped me – so I'm committed to helping those just out of the gate." With his 'pay it forward' attitude, McBride makes himself available by investing what little time he has left in his day to guide those who are interested in following in similar footsteps. ■

## R+T PARK A DIFFERENT VIEW

Balance: a state of equilibrium; an equal distribution of form and function working together.



The development in the park has stayed true to the environmental considerations and guidelines laid out for the park in the *University of Waterloo* Master Plan 1992.

# COMMUNITECH TOP TEN

WHO THEY ARE



**IT STARTED WITH A COMMUNITY:** An ever-growing accumulation of technology expertise in business and academics approaching critical mass. It evolved to a need: A desire for a place to voice and share the ups and downs—the joys and heartaches of a new sector's rise.

When the need for a common sounding ground became acute, a group of CEOs from the tech community gathered together to conceptualize a vision of what they wanted. That vision became today's *Communitech*.

After a decade of tremendous growth, *Communitech* moves into decade number two committed to the spirit of their beginnings. In everything they do, their response is based on delivering what the tech community needs in the ways that make sense. What does that mean? A lot of listening and a lot of action. ■

## TOP 10 REASONS FOR LIVING IN WATERLOO



*Communitech's* exhaustive research into the Kitchener-Waterloo area returned more than just the plain 'facts'. In addition to one of the lowest unemployment rates in Canada and a GDP of \$21.5 billion of which \$13 billion arises from the tech sector, the region is—simply put—a great place to live. Have a look at their Top 10 reasons to live here.

### IT'S READY-MADE FOR OUTSIDE LIVING

- There are more than 3,000 acres of parks and six conservation areas.
- The region boasts 22 golf courses.
- The Grand River is the world's Best Managed Waterway.

### YOU CAN GET 'THERE' FROM 'HERE'

- The local airport is international and offers daily Ottawa flights.
- It's a one hour drive to Canada's busiest airport, Toronto Pearson International.
- Pending traffic, it's a one hour drive to downtown Toronto.

### THE AREA OFFERS URBAN AND COUNTRY LIVING

- Trendy lofts, revitalized warehouse districts and new buildings in downtown cores.
- Three urban core locations (Cambridge, Kitchener, Waterloo).
- Suburban neighbourhoods – old and new.
- Rural country settings minutes from town complete with a thriving Mennonite community.
- 80% of residents live within a 30 minute drive to work.

### IT'S A HIGH TECH HAVEN

- Over 500 tech companies are located in the Waterloo Region including *RIM*, *Google*, *IBM*, and more.

### WORLD'S TOP INTELLIGENT COMMUNITY

- Waterloo Region was voted 2007's 'Intelligent Community of the Year' by New York's Intelligent Communities Forum. [www.intelligentcommunity.org](http://www.intelligentcommunity.org)

### AFFORDABLE LIVING

- Inexpensive housing.
- Comparative salaries and wages to Ottawa and Toronto.
- Highly competitive cost of living.

### ACCESS TO WORLD CLASS EDUCATION

- The area is home to three top universities—*University of Waterloo*, *University of Guelph* and *Wilfrid Laurier University*—and one of Ontario's premier colleges—*Conestoga College*.
- 50,000 students annually.

### OPPORTUNITIES FOR YOU AND YOUR FAMILY

- Opportunities for you to partner in tech, insurance, not-for-profit, education and service businesses.
- Over 30 minor sports organizations in the region as well as music, arts, drama, museums and more.

### CULTURAL FESTIVALS AND CREATIVE SPACES

- The region is home to more than 60 arts, culture and heritage festivals and galleries.

### IT'S ALL HERE

- Cool jobs. Hot technology. Top companies. What more could you ask for?

# SUSTAINABLE WATERLOO

Times are very interesting for Mike Morrice. Since graduating in 2008 with a double degree in business and computer electronics, he has successfully launched a non-profit organization called *Sustainable Waterloo*. What is surprising in light of his achievement is that Mike Morrice never considered himself the entrepreneurial type.

The idea for *Sustainable Waterloo* was born out of a business case Mike did with friend, Chris DePaul, in their final undergraduate year at Wilfrid Laurier. The two were studying the business implications of carbon emission policies. Shortly before graduation, they decided to see if they could take this business case and make it into something real. After vetting the idea and a business plan past industry, government, academia and other NGOs they discovered that, not only was it viable, it actually filled a market need.

Explains Mike, "We truly didn't start out with an entrepreneurial agenda. We wanted to talk to people and hear their thoughts. The place we saw we might add value was in helping organizations bridge the gap between current regulation and the business case for reducing carbon emissions. We saw a revenue opportunity whereby companies could reduce their energy costs for bottom line savings – we were interested in hearing opinions on the idea. At the same time, we knew there were a lot of regional and environmental organizations doing things around sustainability in different spaces. So it was important to know if what we were proposing was already happening."

What Mike found out was that many others thought the idea was sound. It was thumbs up from there. To take things from concept to reality, Mike looked to *Sustainable Silicon Valley (SSV)*, located in California for further inspiration. SSV, working jointly with technology companies, is committed to helping reduce carbon emissions by 20% by 2010 to create a more sustainable future for the California region. If it could happen there, Mike felt strongly it could happen here.

"SSV has accomplished amazing things since its inception," acknowledges Mike. "In Canada, 7 key industries will soon be facing regulation with caps on carbon emissions. There is no reason why all organizations can't get started on reductions now and be ready for the changes. Our goal with the CO<sub>2</sub> Initiative is to provide education, offer the tools to measure emissions, and enable connections to the expertise that can reduce emissions. We also plan to recognize those organizations that are successful in doing so."

*Sustainable Waterloo* has already achieved non-profit status and secured initial funding to provide a measurement tool and develop early infrastructure. Mike has taken on a key role as Executive Director for the organization while partner Chris, though still connected as an active member on the Board of Directors, has continued on a different path. Staffed almost entirely by

volunteers, the organization had its first inaugural forum in early 2009.

Says industry supporter Ray DePaul, President and CEO, *Rapidmind Inc.*, "They pulled off a fabulous event with very little resources and received a 95% approval rating of the event by participants. That is pretty incredible for an organization that started with nothing only a few months earlier. They've done a lot in a very short time." Ray DePaul provides advice to the organization on growth, management as well as promotion. He is one of the many seasoned business, education and government advisors Mike looks to as he grows the organization.

Recognizing Waterloo Region has its own way of doing things, *Sustainable Waterloo* has adopted a collaborative approach. Mike notes that "It will take the entire community working together to reduce emissions in a marked way. This is why we're in the process of building consensus for realistic yet ambitious carbon reduction targets." Following the official launch event in June 2009, *Sustainable Waterloo* will reveal the first partner agreement levels and will look to confirm participating organizations – or Pledging Partners. The expectation is that some businesses may be able to commit to lowering emissions now while others may be working on a different timeframe. Those not quite ready may still want to learn how to measure their carbon footprint and consider ways to reduce it.

**"I'm glad we can be a part of the local solution in Waterloo Region."**

Mike explains that "We're interested in rallying the community and being as inclusive as possible. We're building a business model that will provide flexibility of involvement. Hopefully, the model will encourage many to participate while at the same time provide the opportunity for organizations to be ambitious in their commitment to reduce emissions. At the end of the day, we want both partners and quantified results."

It isn't the easiest time to launch a new start-up let alone a non-profit organization. In spite of the challenges, Mike and his team have already made incredible progress. With climate change the reality of the day, *Sustainable Waterloo* is a timely addition to the area. "When I hear the stats I realize the enormity of the challenge we face," explains Mike, "and I don't really know if we are moving fast enough. But I am glad as a culture we are thinking about these things. I find great encouragement watching those making progress and seeing initiatives that help drive local solutions forward. It is exciting to see how much people care; I'm glad we can be a part of the local solution in Waterloo Region."

"Although I'm not a scientist, I'm definitely concerned that – as a species – we won't respond in time or to the extent that is needed to both curb the ecological crisis and change patterns of behaviour with respect to how we interact and relate with the natural environment. This varies from how we use energy, to how we grow and distribute our food, to the way we design our products and buildings.

But I am hopeful that we have the innovation, capacity and ingenuity to tackle the challenge before us. That's why Chris and I started *Sustainable Waterloo*. We hope to advance the business case for sustainability and provide organizations with both the tools and incentive to voluntarily reduce their carbon emissions, in advance of government regulation. The work we're doing at *Sustainable Waterloo* is one instance among many local solutions to the global challenge of climate change that we're seeing develop all around us."

~ Mike Morrice

Want to be a volunteer or partner with *Sustainable Waterloo*? Visit their website for more information. [www.sustainablewaterloo.org](http://www.sustainablewaterloo.org)



# FRONTLOADING CAREER SUCCESS

Many of us career straight from high school to post-secondary school and then down a career path that is locked into our minds from factors that, more than likely, have nothing at all to do with experience. Upon entry into the workforce, the road to success involves a learning curve like anything else. We accumulate knowledge of the playing field, gain an understanding of the role or task requirements and then apply ourselves with lots of plain hard work.

But what if there was a way to frontload the path to success with some of the knowledge and learning earlier in the journey?



It is called co-operative education, and it has been happening in Canada at the university and college level for over 50 years. It has also been an incredible success. For those in post-secondary education, it is a marvellous way to get—experience in and an idea about—specific careers. The pluses are twofold. For some students, the experience garnered during work terms provides a head start career-wise and for others, work experiences actually guide students to a different route while still on the education pathway and able to make changes.

But what about students who do not plan on post-secondary education? And what about students who do not quite know what sort of post-secondary education they want? What about students who plan to enter a trade? In the last decade, someone realized hooking up business and education earlier than the post-secondary level might just provide the answer to these questions.

With co-op education firmly embedded in the education experience, the idea was not new. But what made this initiative take flight, was the notion of bringing business into education at the juncture point where career-decisions first begin to take shape. Early access to career information and real experiences could benefit all students—no matter their end destination.

In Ontario, the program that delivers on this promise is called “Passport to Prosperity.” Supported through the Ontario Business Education Partnership (OBEP), the program works with education, business, community and government partners to support experiential learning opportunities for all students during high school.

Explains Sherryl Petricevic, Executive Director, OBEP, “Ten years ago the Provincial government put a program in place to bring business to the education table before students finished their high school careers. With the four destination pathways for high school students – straight to the workforce, skilled trades, college or university – what would make the difference for students’ future careers was the ability to explore the pathway appropriate to them before they committed to a post-secondary decision.”

The program is available throughout Ontario and is retro-fit to each geographic region supporting the needs and interests of the population and businesses unique to that area. Each region has its own Passport Co-ordinator

building direct access to employers and area resources through partnerships with existing organizations such as business chambers or associations, municipal government education initiatives and the local school board. Equipped with a shared tool-kit, these co-ordinators find ways to bring experiential learning opportunities in the workplace to the students.

Across Ontario, hundreds of small and large employers have become involved with the program through full-semester co-operative education, career talks, mentoring programs and more. With recruitment challenges on everyone’s horizon, the arrangement creates a win/win situation. Students get to learn and businesses have an early opportunity to engage with their future workers. Recently, the Passport program added an online registry to its suite. EmployerRegistry.ca is a free online community specifically designed to connect employers and students.

“The online access makes it even easier to get involved. This is a tool all co-ordinators encourage their regions to use,” continues Sherryl. “In the Waterloo Region, the Passport program is heavily involved in the high school co-op. Co-op has actually been in this area for years—a lot earlier than other regions. That was likely due in part to the strong co-op influence from the *University of Waterloo*. We encourage everyone to get online and find out about the programs—including students, employers and parents.”

“We learn from them as much as they learn from us.”

- Susan Wilson, Human Resources Manager for The Westin Ottawa

“The program is flexible, adaptable and creative. Since inception it has given thousands of students a head start on their future careers and businesses the opportunity to be involved in learning on the ground floor. Plus business employees gain incredible benefits through the act of mentoring these students. No matter how you look at the program there are just no downsides.” ■

## EMPLOYER REGISTRY. CA

### Employers can:

- Express interest in helping by registering for programs like Career Talks, Co-op or the new Specialist High Skills Major.
- Find information on innovative learning programs across the province that can help you define your future workplace.

### Educators can:

- Access the extensive employer database to manage your local information and create exciting learning opportunities for students.
- Connect with other educators and Passport to Prosperity co-ordinators and share success stories and resources through the content management system.

## GOOD NEWS IN THE SKY

Weathering the storms of today is at the forefront of everyone's mind. For the first time, many companies are being forced to adapt—quickly—to circumstances outside their business model: Things like climate change, energy issues and the global marketplace.

### But what happens when you've been thinking about those things all along?

By the very nature of its business, the aviation industry grew up acutely sensitized to the state of oil, labour and the general economy from a global perspective. Having a flexible approach to change was imperative, not just to growth, but to survival within the industry. When you're already operating with the kind of thinking required when world circumstances directly impact your bottom line, there is a distinct business advantage to be had.

Waterloo's *Navtech* is more than just surviving the times. Notwithstanding the degree of challenge at the moment, their business approach views problems and risks as new opportunities for growth. In the midst of tumultuous times, they are still well positioned.

*Navtech's* business is designing navigation charts for pilots and airports. Essentially, their products map the pathways for flight and ground ways for landing. On the service side, their company's custom products and trained professionals assist both pilots and dispatchers by mapping the most efficient flight route possible. These routes are calculated on a flight-by-flight basis and take into account weather, flight weight and fuel efficiency. These calculations make a quantitative difference to a flight company's bottom line: getting a plane where it needs to be on time and using the least fuel possible.

Established locally in the 1980s, the company made the decision in 2001 to expand outside North America. Through a number of acquisitions, their business-base quickly grew across Europe. Simultaneously, as once cost-prohibitive flights began to come down in price, pleasure flights opened up to a much larger market. Their expansion gave the company the ability to maximize the travel phenomenon while mitigating risk through global versus local sales.

As we brace for a new decade, *Navtech* is regrouping to prepare for their next stage of growth. With a home office in Waterloo's *Research + Technology Park*, and two others in Stockholm and the UK, *Navtech* is focusing their expertise on new flight technology that will both add to and improve their current suite of products.

As energy and fuel controversy continues, they plan not only to weather the storm but to use their role in the industry to maximize fuel efficiency and minimize energy consumption. And that is more than just good business—that is good news. ■



## ACCESSING THE AIR

The old adage “You have to be there” has experienced a technological renovation. The viability of locating locally and working globally is no longer speculation; it is reality. Today's 24/7 technologies can have you in a virtual “anywhere” from the convenience of your own office—no matter where it is.

Quick to recognize an advantage and get in on the ground floor, expansion in the Waterloo Region is ever-increasingly focused on building a business base of national and international significance. Yet at the same time, the Region recognizes that the demands of global business still require, at times, that you truly do have to “be there.” Ready and convenient access to flight travel remains a necessity for building a globally focused infrastructure.

Getting there on time more than counts in an always-on world, but drive times to Toronto airport have increased exponentially over the last decade. With mounting traffic density, near to constant highway construction and repair work, and unpredictable weather patterns, the drive often varies from 1 hour at best to 3+ at worst. There are no guarantees of getting anywhere on time no matter how much driving time is allotted for the journey.

Several years ago the area's major travel partners—business, education, chambers, major corporations and Regional government—saw the future coming and put plans in place to get ready. They knew fast access to air travel would be a key requirement if businesses were to locate in the area. The partners also knew that working together, they might be able to pique airline services interest in flying out from the Region by showing them that the market in the area had business waiting for them. Destinations included the main national business stops and international options.

In 2005, the Region did a route analysis of destinations and worked to match air services to those needs. The key to bringing airlines on board was to show them that there was more than just a market interested in leaving, but that there was a market on the other end interested in arriving. Plans also included expansion to the primary runway to accommodate access to the new destinations.

The Region then made significant changes to the terminal making it more intuitive, thus improving the guest experience. Parking is quick, convenient and getting in and out for flights is a hassle-free experience. Best of all, getting to the airport is a simple, fast drive from virtually any point in the Region.

In 2005 with the business-travel niche secured, they ventured into the vacation destination space. Currently, exclusive charter flight vacation destinations fly out on a weekly basis from December to March. Since 2004, the airport has seen over 275,000 people come and go.

Business is booming. Comprising 1,000 acres, the Airport is ready for expansion and has the ability to accommodate future development. They have five airline partners flying from their location and the plan is for the long-term. Their way of measuring success is by serving their market the way they need to be served. The results have been a hit; the Region of Waterloo International Airport has become a very busy place. ■



# THE RECRUITMENT GAME

FINDING THEM. KEEPING THEM.

There is one statement that most technology companies in the area will agree with: Talent is today's number one issue. Software developers are hot and in demand, experienced sales skills spanning all disciplines are at a premium, and finding enough product and project managers is of vital concern for virtually everyone.

**"It really comes down to basics – companies need the right people to grow their business."**

**But locating people with the skills and knowledge for the job is only half of the equation. Creating a happy, balanced workplace for the different demographics healthy recruitment demands is the other.**

Karen Gallant, Director of Talent Networks at *Communitech*, focuses all her energies on helping to fill in the gap of talent with a balance of people. Hard at work for the last year, Karen explains what the search for talent entails, "It really comes down to basics – companies need the right people to grow their business. To be successful with the talent competition, companies have to invest serious effort."

Karen explains that much, if not all, of *Communitech's* work on recruitment has been driven by the companies in the area. "It truly is a community-based drive. The companies are key supporters for all our initiatives. Although we facilitate and organize, they are right beside us every step of the way. Working together gives us greater efficiency and focused efforts provide for deeper penetration."

In 2008 *Communitech* developed a series of events, shows and brand building activities targeted on recruitment. Activities started in the local area and then fanned out. Using a 3-tiered approach, the activities utilized intentional and mindful approaches tailored to a particular demographic or generation.

"It's important to have balance in the workplace," explains Karen. "Each generation brings something different to the table with no one generation taking precedence over another. They are all important. For example, traditionalists from the Boomer Generation bring loyalty and Gen

## COMMUNITECH'S 3-TIERED APPROACH

Three different demographics. Three different approaches. Recruitment efforts take into account demographics and experience level to intentionally target efforts for maximum impact.

### 1. ENTRY WORKFORCE

**Outcome:** Keep graduating students in the region.

**Strategy:** Integrate students with the region and job opportunities that exist in the area. Let them know they can stay and have a great career.

- On Campus – *Communitech* networks students into the community by taking the news to the students via speakers, entrepreneur-in-residence visits and more.
- Off Campus – *Communitech* integrates students into the community through networking opportunities, conferences and other initiatives.

### 2. SEASONED EXPERTISE

**Outcome:** Attraction of seasoned technology workers.

**Strategy:** Promote the Waterloo brand in other technology communities to illustrate to seasoned technology workers that the region is a viable choice for career-building.

- Partnering with area tech firms, *Communitech* travels to Ottawa, Markham, Mississauga and Burlington to inform potential talent of the advantages to living and working in Waterloo.

### 3. INTERNATIONAL EXPERIENCE

**Outcome:** Bring Canadian workers working internationally to the region.

**Strategy:** Create connections with ex-pats to ensure that when they are ready to come back to Canada they will seriously consider locating in the region.

- *Communitech* works with university alumni associations and digital *Moose Lounge* to connect with the ex-pat community in California. Through various initiatives and events, *Communitech* lets this community know what is going on, what has changed and what is waiting.

X and Y bring incredible energy. Having all generations represented adds a layer of richness to organizations."

With the close proximity of three major universities plus a community college, the area truly grows a lot of its talent locally. That helps take care of the next generation of workers. For seasoned professionals, the net must be cast farther and wider.

"We've figured out that each given demographic can be found via a particular life situation. So we focus efforts not just generationally and geographically, but from the life perspective. What that means is we look for new recruits on campuses, seasoned professionals in other technology communities, and those in the middle in the ex-pat community. Just as we look for recruits in different places, we also deliver different information to each — the story that matters to where they are in their career and their life."

So what is the story they tell about the area? They tell about cool jobs, amazing career opportunities, regular visits to the area by Bill Gates, great family living, access to higher education, culture and art, area geography, proximity to other cities, ease of getting around town, cost of homes, museums, happenings, great restaurants, and the fact that sometimes getting to the office from home might be... a 10 minute walk.

"Proximity is really beginning to matter for the seasoned professionals. They like the concept of no commute. For

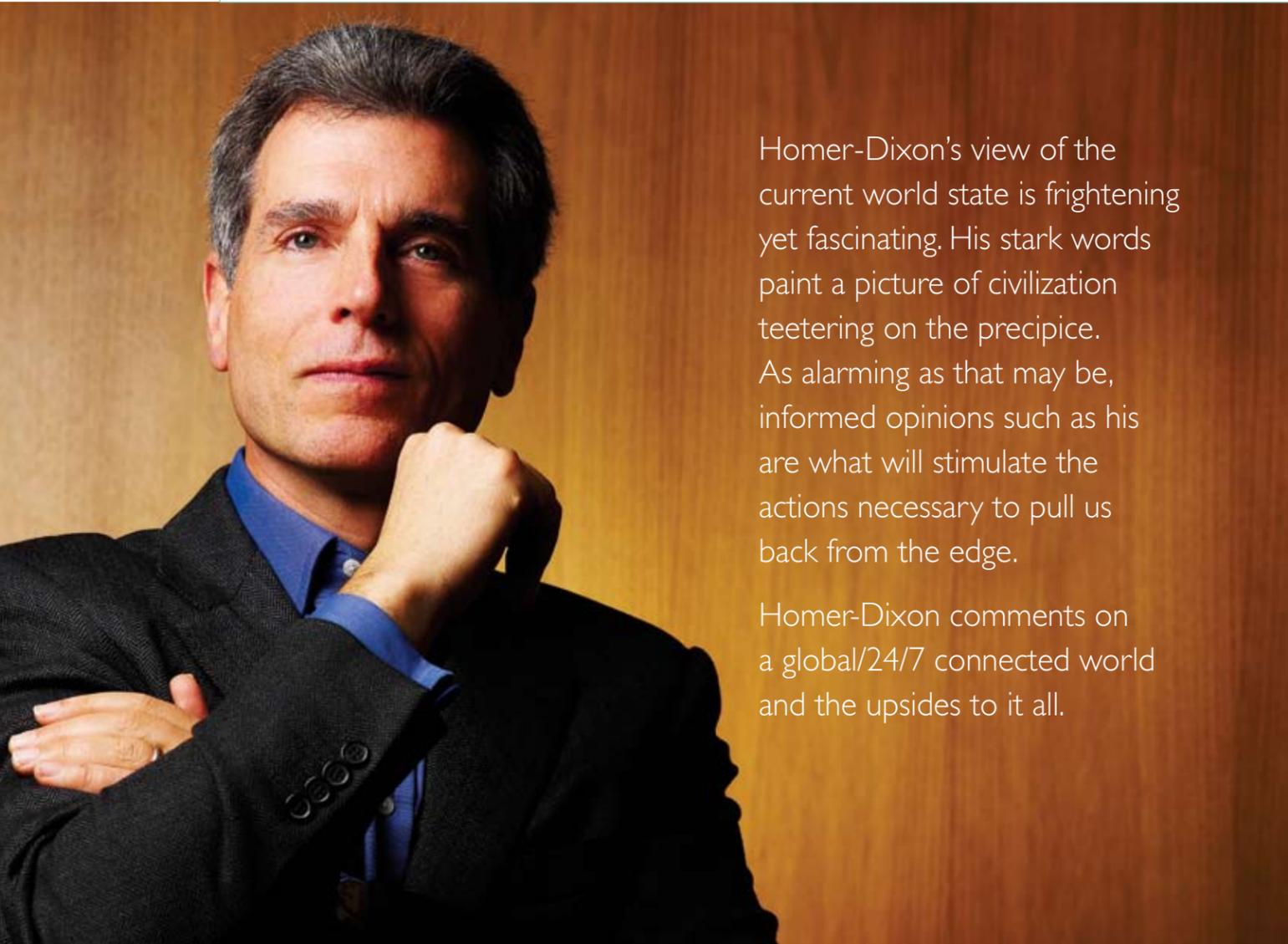
others, it's the story of all the opportunities that are here because so many tech companies are located here."

"And I always sell them on how great the area is in general. I know first-hand it's a great place to live and a wonderful area. This is one unique community. When someone is successful around here they put a hand down to help the next person up. People see the success of each other as success for the region. Last year many local companies successfully recruited and hired through our initiatives. The story of Waterloo is an easy sell. ■



# PRAGMATIC ANSWERS TO COMPLEX PROBLEMS

VISIONARY. AUTHOR. THOUGHT LEADER.  
MEET THOMAS HOMER-DIXON.



Homer-Dixon's view of the current world state is frightening yet fascinating. His stark words paint a picture of civilization teetering on the precipice. As alarming as that may be, informed opinions such as his are what will stimulate the actions necessary to pull us back from the edge.

Homer-Dixon comments on a global/24/7 connected world and the upsides to it all.

Global visionary, award-winning author (*The Upside of Down*, *The Ingenuity Gap*), and former director of the Trudeau Centre for Peace and Conflict Studies at the University of Toronto, Thomas Homer-Dixon holds the Centre for International Governance Innovation Chair of Global Systems at the Balsillie School of International Affairs and is a Professor in the Centre for Environment and Business in the Faculty of Environment, at the *University of Waterloo*.

Our world is full of surprises. Shocks, breakdowns, jumps from one thing to another. The idea that we can remove volatility by controlling everything is misguided. We cannot manage and manipulate everything. The goal should be resilience. The goal, simply put, is to keep things on the rails.

- Thomas Homer-Dixon

#### WHERE WE ARE...

Climate change. It's a rude awakening. The 21st century will be remembered as the 'Age of Nature' in which we relearned the tough lesson that we are deeply dependent on nature for our individual and collective well-being. Many of us remember what the climate was like years ago, and science confirms that things are changing fast. We need to shift our fundamental views of the relationship between humans and nature.

#### CONSIDERING CONNECTIVITY...

We've forged ahead with connectivity without any discrimination. There's been no thought to whether it's good or bad — too much or too little. We've operated on the assumption that the more connectivity the better with no consideration to the fact that some may not want any at all.

#### TALKING 24/7...

The vision was for a frictionless flow of ideas and energies across the world. We're there. We trade our goods and services from one side of the world to another. We've made ourselves a world of one connected market. At some point, we need to step back from the vision and ask ourselves: What is good technology?

#### ABOUT 'GOOD'...

Let's talk about the fate of the last commercial fruit canning facility east of the Rockies. It was a subsidiary of two giant multinational private equity firms that specialized in leveraged buy-outs. Although the plant was making money, consumer tastes had shifted to fresh fruit. The interest of the firm was to maximize profits. Besides, Ontario could always get canned peaches from China. They closed operations in 2008.

Is it 'good' that the impact of the dominant economic model of specialization, connectivity and trade left Ontario peach farmers without a destination for their ripe peaches? These orchards are currently at risk of being ripped from the ground. Is it good that the prime motivator for decision-making was not the well-being of this specific region or community—including its ability to provide food?

#### UPSIDES NOW...

As every system increases in content and connectivity it adapts to cycles, breaks down and then reforms. That is where the upside lives. The point where systems are wiped out becomes the juncture for new possibilities.

Right now, financial systems are in or on the verge of catastrophe. Right now, our climate is in crisis. Right now is not the time for conventional assumptions; it is the time for new thinking.

#### ANSWERS BEGIN...

To avoid the cascading failure of a connected world, we have to learn resilience. Building capacities through lenses that adapt to regional needs based on resources, means regions can better withstand the impacts of globalization. That is a different model than pure sustainability. That is self-sufficiency. The side benefit of self-sufficiency within societies is the ability to withstand shock without catastrophe.

#### TURNING THE TIDE...

Climate change can be the centre of an economic revolution. Take what you have to do and make it a viable economic proposition. There is enormous potential in developing 'green' solutions which, when taken to market, will stimulate and build a 'green' economy. By solving one problem, we can solve another.

#### PLACES TO START...

This is a pragmatic, problem-solving community. A big part of innovation includes learning from failure and getting past it. The *University of Waterloo* has a 'let's do it' attitude where there's no standing still or lamenting losses. When something doesn't work, they move on to 'what's next?' There is a sound belief in creating ideas and taking risks.

The place where the relationship between these ideas and private sector spin-offs exists is across the road at the *R + T Park*. There is a cultural reinforcement that flows in both directions; businesses are receptive to ideas that will make money, and the university provides the time and space for research and projects that generate ideas. ■

# WANTED ONLINE: RADICAL CHANGE

Larry Smith,  
Economics Professor,  
*University of Waterloo.*

Larry Smith is a thinker with a bird's eye view into the future. With his current student count now at 27,000, he is kept privy to what is happening right now in a way few of us have ever experienced. At the moment, Professor Smith has turned his gaze upon the internet, advertising and newspapers. Join him as he ponders: What will happen next?

**INTERNET THE GOOD:** The internet allows us to share all of humanity's opportunity around the world. Ideas. Markets. Affluence. It has facilitated economic activity across the face of the planet.

**INTERNET THE BAD:** The internet is the single greatest time waster ever invented. It beguiles. It misinforms. It misdirects. It has raised competitive pressures to new levels.

## LET'S TALK ADVERTISING.

Recall: The Google model for advertising was invented by technological geeks playing with a technological information delivery system. The model is this: billions of eyeballs + billions of ads = billions of \$\$\$\$\$. They made lots and lots of money doing this, and we all learned: "Advertising shall save us all." So we copied.

Today, the number of sites using search engines or pop up ads as the backbone for their web revenue is preposterous. Surely we've all recognized that if this model were transferable, everyone on the internet with a website would be rich. Face it, there are just not enough people on Earth to support the number of ads plugged into our faces on a click-by-click basis.

The latest movement continues to chase eyeballs to the next trend which as we all know is social marketing. This is called trend chasing. There are dangers inherent to revenue derived from latching onto the ubiquitous 'trend'.

In our haste to embrace the next new frontier, we forget the first lesson of advertising, marketing and PR: Translating the right message to the right audience. Instead of putting the formula of 'eyeballs + ads = \$\$\$\$', under the microscope, we're making decisions based on what just might just be, an antiquated model. What if there was a vehicle that would do more than just stick ads in people's faces?

## LET'S TALK NEWSPAPERS.

They're dying: A 150 year history is over. At one time they represented truth; they were the most trusted information-giving source on the planet. Their reputation for veracity and fairness was the underbelly of financial success. When they were wrong, their reputation was on the line. And that meant bucks.

What happened? Why the internet of course. As people flocked to the immediacy of the screen they turned their backs on newspapers. Apparently, the market proposition of delivering news and truth via paper is rapidly becoming obsolete. So newspapers joined the swell of online experiences within a global model whereby all competitors vie for the same eyeballs.

They give everyone they think might be reading what they think they might want—another celebrity story, the latest on the 'labra-doodle' trend, and the same wire stories everyone else is delivering. The writing is a formulaic prescription maximized for a print experience. They took a paper lay-out design and stuck it on a screen. And they plunked

ads everywhere. The online experience is not a paper experience, a screen experience or anything in between.

The newspaper world's competitive response to the new paradigm is a dog's breakfast. And their online advertising is unimaginative. Across the board subscription levels and online readers are dropping like stones. Where they have managed to sustain online interest, they aren't even making money from that readership. Their business model is obsolete. Our deliverers of truth have not made the transition to an online world.

## LET'S TALK INTERNET.

There is a crisis going on, and there is an even bigger crisis looming. As we move into the next era the pendulum will swing from what we have come through and all its dangerous consequences.

In a tumultuous and dangerously competitive world, if you do not arrive with truth the herd will trample you; people with inaccurate information will be punished and people armed with truth will be rewarded. In the plethora of online information we have finally discovered what our information delivery system lacks: Truth. The internet is 'faction information' filled with assumption and opinion. We have need for a 'truth' engine. Our times demand this.

Innovation is born in the looming gaps. As need increases, opportunity only opens wider. When the need is lucid, the market will offer a solution.

How do we save the obsolete newspaper business from the clutches of death? How do we make creative advertising revenue with a new vehicle? How do we deliver truth?

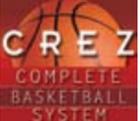
Perhaps the answer for these gaps will be found in a new model: Radical Innovation (exploit the 'good') X (mitigate the 'bad') = \$\$\$\$\$\$

As always, radical innovation is the base of empire. ■

Radical Innovation  
(exploit the good) x (mitigate the bad) = \$\$\$\$\$\$

# R+T PARK DIRECTORY

	<p><b>Accelerator Centre</b></p> <p>The <i>Accelerator Centre</i> provides emerging technology businesses with the tools they need to grow and succeed. In addition to space access, start-up businesses are plugged into resources, networking opportunities and mentorship programs. Clients are also assisted in obtaining financing, including introductions to potential investors and government financing sources.</p> <p><a href="http://www.acceleratorcentre.com">www.acceleratorcentre.com</a></p>
	<p><b>AcMed Technology Incorporated</b></p> <p><i>AcMed</i> is dedicated to an advanced technology platform utilizing photon diffusion scanning spectroscopy to non-invasively measure hemodynamics and oxygenation in key biological tissues and blood vessels.</p>
	<p><b>Bayalink Solutions Corporation</b></p> <p><i>Bayalink</i> is the manufacturer of the Liberty product. Liberty virtualizes the display of your BlackBerry to enable you to use a large screen and regular keyboard to interact with your BlackBerry.</p> <p><a href="http://www.bayalink.com">www.bayalink.com</a></p>
	<p><b>Canadian Innovation Centre</b></p> <p>The <i>Canadian Innovation Centre (CIC)</i> is a national, not-for-profit fee-for-service organization. <i>CIC</i> helps early stage innovators take the first important steps in the commercialization process by aiding them in identifying the optimum way forward and validating the market opportunities available to them.</p> <p><a href="http://www.innovationcentre.ca">www.innovationcentre.ca</a></p>
	<p><b>Canadian Water Network</b></p> <p>The <i>Canadian Water Network (CWN)</i> was created as one of <i>Canada's Networks of Centres of Excellence (NCE)</i> to develop opportunities related to the provision of safe, clean water. In collaboration with universities, government and industry, the <i>CWN</i> has developed a variety of scientific projects and initiatives that address key water-related issues facing Canadians.</p> <p><a href="http://www.cwn-rce.ca">www.cwn-rce.ca</a></p>
	<p><b>CBET- The Centre for Business, Entrepreneurship and Technology</b></p> <p><i>CBET</i> was created to support, build on and expand the entrepreneurial initiatives at the <i>University of Waterloo</i>. The university's reputation for encouraging and spinning off successful entrepreneurial ventures is unmatched in Canada.</p> <p><a href="http://www.cbet.uwaterloo.ca">www.cbet.uwaterloo.ca</a></p>
	<p><b>CellScale Biomaterials Testing</b></p> <p><i>CellScale</i> develops research instruments for the analysis of natural tissue and replacement biomaterials. Customers are researchers involved in the investigation of soft-tissue disease, drug therapies or innovative new medical treatments. <i>CellScale's</i> initial product release provides biaxial analysis of small geometry samples.</p> <p><a href="http://www.cell-scale.com">www.cell-scale.com</a></p>
	<p><b>CertiChip</b></p> <p><i>CertiChip Inc.</i> is a Canadian fabless semiconductor IP company. It specializes in circuit techniques and architectures to improve the robustness of integrated circuits manufactured in advanced CMOS processes at or below 90nm.</p> <p><a href="http://www.certichip.com">www.certichip.com</a></p>

	<p><b>CGI</b></p> <p><i>CGI</i> is one of the largest independent firms of its kind in the world. <i>CGI</i> provides systems integration and consulting, application and technology management, and business process services to clients from offices in Canada, the United States, Europe and Asia Pacific</p> <p><a href="http://www.cgi.com">www.cgi.com</a></p>
	<p><b>Columbia Lake Health Club</b></p> <p><i>Columbia Lake Health Club</i> is a state-of-the-art full-service fitness facility focused on improving members overall health and well-being. We provide exceptional staff who keep members motivated, challenged and informed to help them live a longer and healthier life.</p> <p><a href="http://www.columbialakehealthclub.com">www.columbialakehealthclub.com</a></p>
	<p><b>CommunitECH: Waterloo Region Technology Association</b></p> <p><i>CommunitECH</i> is an industry-led organization driving the growth and success of Waterloo Region's technology sector through leadership, connections and promotion. Members include large publicly traded companies, growing firms, start-up enterprises and organizations that support the growth of these companies.</p> <p><a href="http://www.communitech.ca">www.communitech.ca</a></p>
	<p><b>Crez Basketball Systems Incorporated</b></p> <p><i>Crez Basketball Systems Inc. (CBSI)</i> is a leading provider of sports information technologies and services for collecting, managing and distributing sports content for athletic and media organizations. Currently, the company has positioned itself to serve the global sport of basketball.</p> <p><a href="http://www.crezbasketball.com">www.crezbasketball.com</a></p>
	<p><b>CrossChasm Technologies Inc.</b></p> <p><i>CrossChasm Technologies</i> is a young company which utilizes advanced modeling and simulation to intelligently drive innovation and commercialization of advanced hybrid powertrains. <i>CrossChasm</i> is also pursuing the development of products related to grid-to-vehicle (G2V) applications of plug-in hybrid vehicles.</p> <p><a href="http://www.crosschasm.com">www.crosschasm.com</a></p>
	<p><b>DossierView</b></p> <p><i>DossierView</i> provides desktop business intelligence software that enhances and organizes information access within the intelligent enterprise from the desktop. The technology organizes work environments into project specific dossiers that users can instantly switch between thus enhancing their ability to complete projects.</p> <p><a href="http://www.dossierview.com">www.dossierview.com</a></p>
	<p><b>Education Credit Union</b></p> <p>With two KW locations, the <i>Education Credit Union</i> is a full-service financial credit union including a comprehensive Wealth Management Program. The primary difference between <i>ECU</i> and other financial institutions is a personal approach that focuses on putting members first and offering cost effective products and services.</p> <p><a href="http://www.ecusolutions.com">www.ecusolutions.com</a></p>
	<p><b>ECU Wealth Management</b></p> <p>The <i>ECU Wealth Management</i> team, operating in partnership with the <i>Education Credit Union</i>, strives to provide personalized financial planning and investment strategies to both its existing membership and to the growing population of the Tri-city area.</p> <p><a href="http://www.ecusolutions.com">www.ecusolutions.com</a></p>
	<p><b>Energent Incorporated</b></p> <p><i>Energent</i> provides industrial, commercial and institutional energy consumers with customized energy management solutions to lower their energy costs and gain increased value from their energy resources. <i>Energent's</i> solutions combine the technology, tools and resource expertise required to enable success.</p> <p><a href="http://www.energent.com">www.energent.com</a></p>



#### Frozen North Productions

*Frozen North Productions* is an independent game development studio based out of Waterloo. Employees take a great interest in applying principles of engineering design to software development in the games industry. The company's first Nintendo Wii game is scheduled to hit store shelves September 2009.

[www.frozennorth.net](http://www.frozennorth.net)



#### Google

*Google's* mission is to organize the world's information and make it accessible and useful. *Google's* presence in Waterloo is set up to support this mission with a general engineering team focused on research and development for *Google's* mobile products and online advertising infrastructure. As the office expands, general engineering projects for many other *Google* products will be carried out here.

[www.google.com](http://www.google.com)



#### Infusion Angels Innovation Centre sponsored by Microsoft

As the newest Microsoft Innovation Centre, the goal of the *Infusion Angels Innovation Centre* is to foster innovation and growth in local economies. The centre offers students, researchers, professional developers and executives access to world-class facilities, consultants and free resources.

<http://ic.infusionangels.com>



#### Institute for Quantum Computing

The *Institute for Quantum Computing* applies quantum mechanical systems to a vast array of relevant information processing techniques. It has a truly unique environment that fosters cutting-edge research and collaboration between researchers in the areas of computer, engineering, mathematical and physical sciences.

[www.iqc.ca](http://www.iqc.ca)



#### Karos Health

*Karos* develops software solutions that improve patient care. Its products enable the exchange of health information across healthcare enterprises and communities. *Karos'* innovative use of industry standards makes clinical information exchange simple, fostering collaboration between healthcare vendors, providers and patients.

[www.karoshealth.com](http://www.karoshealth.com)



#### Kids & Company

With 20 locations across Canada, *Kids & Company* offers a variety of child care options including full-time and part-time care, back-up care in case of an emergency, enriched Montessori Kindergarten programming at select locations, and no late fees when employees are held up at work.

[www.kidsandcompany.ca](http://www.kidsandcompany.ca)



#### Lantern Hill IT

*Lantern Hill IT* helps organizations of all sizes optimize their networks for current and future network applications. With over 30 years combined experience, *Lantern Hill IT's* staff provide network design, support and monitoring services as well as IT support and system administration.

[www.lanternhillit.com](http://www.lanternhillit.com)



#### LeedTek Inc.

*LeedTek Inc.* designs and implements Integrated Sustainable Solutions to reduce the carbon and ecological footprint for small to medium sized businesses. *LeedTek* assesses and devises energy conservation measures as well as alternative energy generating systems customized to the client's need.

[www.leedtek.ca](http://www.leedtek.ca)



#### LoyaltyMatch

*LoyaltyMatch.com* is the only online global marketplace that facilitates the conversion of frequent flier miles and other loyalty program member points into cash or merchandise. Shoppers do not need to belong to any loyalty program to trade or buy reward goods and services. Visit *LoyaltyMatch.com* for more information.

[www.loyaltymatch.com](http://www.loyaltymatch.com)



#### Miller Thomson LLP

*Miller Thomson LLP* is one of Canada's largest national law firms, with more than 500 professionals working across Canada. The firm provides a complete range of business law, advocacy and personal legal services to Canadian and international corporations, entrepreneurs, institutions, governments and not-for-profit organizations.

[www.millerthomson.com](http://www.millerthomson.com)



#### Nanotechnology Engineering

*UW's Nanotechnology Engineering* program is collaboratively offered by the Departments of Chemical Engineering and Electrical and Computer Engineering in the Faculty of Engineering, and the Chemistry Department in the Faculty of Science. It prepares students to be technological innovators and the next generation of leaders in the new frontier of nanotechnology.

[www.nanotech.uwaterloo.ca](http://www.nanotech.uwaterloo.ca)



#### Navtech Incorporated

*Navtech* is a leading international provider of aviation software. The company's software includes integrated flight operations solutions, dispatch solutions, and crew planning software. The products provide aeronautical charts and navigational data while working to maximize airline efficiency, reduce costs, and meet both safety and government regulations.

[www.navtechinc.com](http://www.navtechinc.com)



#### National Research Council Industrial Research Assistance Program

The *NRC Industrial Research Assistance Program (NRC-IRAP)* provides a range of technical and business oriented advisory services, along with potential financial support, to Canadian small and medium-sized enterprises with a focus on science and technology. *NRC-IRAP* supports innovative research and development and commercialization of new products and services.

[www.irap-pari.nrc-cnrc.gc.ca](http://www.irap-pari.nrc-cnrc.gc.ca)



#### Ontario Centres of Excellence (OCE) Inc.

*Ontario Centres of Excellence (OCE)* drives the commercialization of cutting-edge research to strengthen Ontario's economy and enhance its global competitiveness. OCE also fosters the development of promising innovators and entrepreneurs, working with Ontario's industry, universities, colleges, research hospitals, investors and governments.

[www.oce-ontario.org](http://www.oce-ontario.org)



#### Open Text Corporation

*Open Text* is the market leader in providing Enterprise Content Management (ECM) solutions that bring together people, processes and information. Our software combines collaboration with content management, transforming information into knowledge that provides the foundation for innovation, compliance and growth.

[www.opentext.com](http://www.opentext.com)



#### Pokerspace.com

*Pokerspace.com* is an online community built for poker enthusiasts and professionals. Built using the latest Internet technologies and Web 2.0 strategies, *Pokerspace* is a communication platform focused on improving ones game via the sharing of poker strategies and a wealth of educational resources. *Pokerspace* also runs various tournaments and promotions with prizes ranging from poker sponsorships to trips around the world!

[www.pokerspace.com](http://www.pokerspace.com)



#### ProductWiki Inc.

*ProductWiki* is the resource for free, unbiased product reviews and information written and maintained by the community. Using a wiki model, the community creates reports containing essential information necessary to make intelligent purchasing decisions.

[www.productwiki.com](http://www.productwiki.com)



#### Semacode Corporation

*Semacode* is the leading provider of online marketing solutions that utilize the camera phone's ability to interpret 2D barcodes. *Semacode* is revolutionizing print advertising by allowing consumers to interact with print media and perform electronic transactions on their mobile device.

[www.semacode.com](http://www.semacode.com)



**SmartPatterns Incorporated**

SmartPatterns Inc. provides needle crafters a way to design their own needle art pattern. The software, Sweater Designer v1.0 – Winter 2008, enables a non-designer to quickly and easily design their own sweater pattern.

www.smartpatterns.com



**SparkMatrix Incorporated**

SparkMatrix technology is a web-based service software that is currently being used to automate property management. Designed for multi-dwelling property management, the integrated software applications enable tenant relationship management, facilities management and financial management.

www.sparkmatrix.com



**Sybase iAnywhere Solutions**

Sybase and its iAnywhere subsidiary provides open, cross-platform enterprise software solutions that manage and mobilize information from the data centre to where business needs to occur – anywhere, anytime. The world's most critical data in commerce, communications, finance, government and healthcare runs on Sybase.

www.sybase.com



**Tangam Systems Incorporated**

Tangam Systems provides monitoring and data analysis technology based on computer vision and machine learning. The award winning solution for casinos provides casino management with functionality to track, manage and improve player profiling, game security and human resources performance.

www.tangamsystems.com



**TechTown Café**

TechTown Café provides both premium on-site roasted fair trade, organic coffee and healthy food choices in a comfortable environment. The café provides catering for events within TechTown and the R+T Park for the convenience of guests and neighbours. Specialty soups, salads, wraps and sandwiches are made fresh each day.

www.techtowncafe.com



**TechTown Dentistry**

TechTown Dentistry is a dental practice with a difference – The Dental Health Advantage – it's an innovative process that helps clients discover their opportunities to grow and protect their dental health confidence. TechTown Dentistry's core values are kindness, extra mile service, integrity and quality.

www.techtowndentistry.com



**T-Ray Science, Inc.**

T-Ray seeks to harness the power of TeraHertz radiation for applications in the medical, pharmaceutical, and wellness lifestyle industries. Focus is on the research, development, manufacture and marketing of handheld and other devices and their component parts.

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Clockwise: Economical Insurance building Riverbend Dr. (2001); University of Waterloo School of Pharmacy (2007); Wilfrid Laurier University Dining Hall (2002); Niagara Region Headquarters (2006); Wilfrid Laurier University St. Jerome's restoration (2006)



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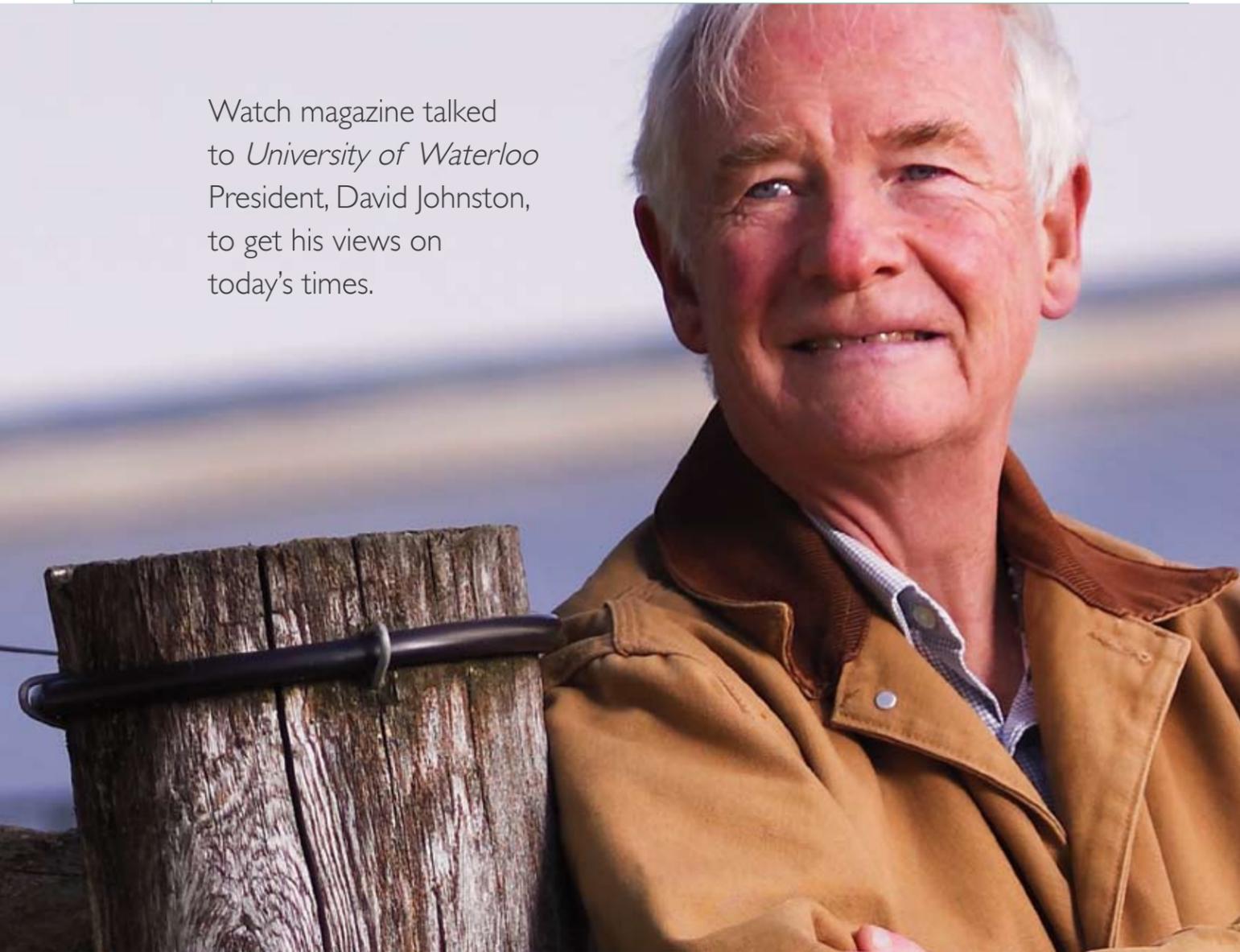
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## THE LAST WORD

Watch magazine talked to *University of Waterloo* President, David Johnston, to get his views on today's times.



**Q.** The times we live in right now seem characterized by an unrelenting onslaught of global challenges at both economic and environmental levels.

**A.** Every generation believes it lives in unique times. With that in mind I have to say, in my lifetime, I have never before seen a situation like the one we are currently experiencing. With the rapid rise of technology, we have gone through monumental changes in how our world works. We operate as a global unit—irrevocably connected. The ripple effects extend everywhere as a direct impact of the chain of connectedness.

**Q. WHAT DOES THAT 'CONNECTIVITY' MEAN TO OUR DAILY LIVES?**

A. We all have a vital part to play with the issues regardless of origin. We have to be smarter about everything we do because our action or inaction has world-wide implications. Think about recession; a recession is no longer self-contained as a country specific occurrence. The same holds true for other issues—be it energy, food or health. North America's auto sector is in crisis so we will need to build smarter. Energy is a critical issue, so we must hone how we provide, source, use and deliver energy. Waste issues are paramount, so we have to compost, reuse and recycle.

“...our action or inaction has world-wide implications.”

**Q. WHAT DOES 'CONNECTIVITY' MEAN TO A UNIVERSITY?**

A. Universities are places of research and discovery. We have a responsibility to channel our knowledge into problem solving.

Using our own connectivity with academia, government and business, we are positioned to gather a deep, global understanding of the issues from multisided perspectives. Looking inside our institution's strengths, we can look at where or how to provide answers. For example, we understand that quantum computing and nanotechnology have very important roles to play with energy issues; growing and expanding that expertise is one of our focuses. Yet we are also aware that global issues are about more than just the issues themselves; problems are often complicated by policy. So our policy expertise, housed in the Balsillie School of International Affairs, has a part to play in the delivery of solutions.

At the business end of things, we have our *Research + Technology Park*. Not only is the park there to create value-added jobs, they are using their industry to develop viable, marketable solutions to problems.

**Q. IT'S BEEN 5 YEARS SINCE GROUND WAS FIRST BROKEN ON THE UNIVERSITY OF WATERLOO'S RESEARCH + TECHNOLOGY PARK. WHAT DO YOU THINK OF WHERE IT'S AT NOW?**

A. The *Research + Technology Park* has more than fulfilled our expectations. The dream was to create a physical location where the interests of education, business and research could unite and—hopefully—converge into technology transfer. Although the idea to start a park was not unique, what the *University of Waterloo* brought to the table was a different approach. What is happening in the park now is the product of that approach.

**Q. WHAT IS THE 'DIFFERENCE' IN THE UNIVERSITY'S APPROACH TO THE PARK?**

A. From the very beginning, early conceptions of the park took into account the interests of government at all levels—municipal, regional and federal. When it came time to commit, those interests were represented with monetary investments. Essentially, that meant all partners had a vested interest in the park, and a determination to provide whatever was necessary for success.

Another example is the *Accelerator Building*. One of the key concepts for the park was the idea of a 'next step' location for technology startups. To get it right, we started with a community board comprised of executives from the private sector as well as from educational institutions and government. Again, we brought all the partners with a vested interest in making things work to the table. That alone did not fit the typical model for an accelerator centre; it was actually an unusual approach. Normally, a university would take responsibility for all decision-making and the running of the centre. Instead, we made it a community effort as an out-of-house operation with the university playing a minimal role.

**Q. SO, HOW IS THE PARK HELPING TO FIND THE SOLUTIONS WE NEED RIGHT NOW?**

A. Looking a little closer at the actual physical plan for the park, all building and planning efforts included sound environmental decisions. That has included the infrastructure as well as encouragement for responsible building practices. The *Accelerator Building* has a green roof to assist with heating and cooling energy consumption and the newest building, *The InnoTECH Building*, has been LEED rated.

If we look at the clients of the *Accelerator Building*, 4 of the businesses have to do with green technology. Everywhere you look in the park, there is an acute awareness of environmental responsibility—through all lenses—personal, business and global citizenship.

“There is a genuine entrepreneurial energy at Waterloo at every level.”

**Q. THE UNIVERSITY OF WATERLOO HAS BECOME KNOWN AS THE MOST 'INNOVATIVE' UNIVERSITY IN CANADA. TO WHAT DO YOU ATTRIBUTE THAT SUCCESS?**

A. There is a genuine entrepreneurial energy at Waterloo at every level. It lives in our students and in our faculty. It has been our history, and we want to ensure it continues to help find the answers needed for our future. What we can do at the administrative level is to provide that energy with the tools needed to take knowledge to market as solutions and the freedom to do it. We are well prepared to do it all. Freedom + UW = Success. ■