Perspective™

Innovation & Technology

ONTARIO: POWERING THE GLOBAL INNOVATION ECONOMY

+ A World-Leading Tech Incubator

+ Markham: Powering next-generation auto innovation

+ U of T's Schwartz Reisman Innovation Campus

FROM "EARLY STAGE" TO THE WORLD STAGE

Ontario startups know that real growth demands a real legal strategy – one tailored to their business and driven by the realities of their sector. That's where we come in.

Whether you're raising capital, expanding your team, commercializing your IP or preparing for your exit, our tech lawyers pair hands-on experience with a broad global perspective to help your company take flight.

Learn more at **gowlingwlg.com/tech**

GOWLING WLG

Ontario relies on the ideas, talents and hard work of people from around the world.

Learn how foreign workers, international students, business owners or entrepreneurs from outside of Canada can apply for permanent residence in Ontario, or how Ontario businesses can recruit international talent. Vist Ontario Immigrant Nominee Program (OINP) www.ontario.ca/page/jobs-and-employment

The province has updated its immigration application system to include a points system and a stream dedicated to bringing highly qualified and motivated entrepreneurs to invest in Ontario.

The Ontario Entrepreneur Stream (OES) of the Ontario Immigrant Nominee Program (OINP) is for applicants from outside of Canada interested in starting a new business or buying an existing business in Ontario. It offers the chance for permanent residence once a business is established.

Under an expression of interest (EOI) system, applicant profiles are scored and the province invites chosen candidates to apply for a provincial nomination for a temporary work permit from the Canadian government.

The new system aligns with the Government of Canada's Express Entry system for skilled workers. It will more seamlessly handle demand, making the process easier for the many people who want to immigrate to Ontario.

The OINP issued 8,054 nominations in 2020, including its first under the Entrepreneur Stream.

Requirements for starting a business

Entrepreneurs (who can apply with up to one business partner) must prove a minimum net worth, which ranges from $400,000 to $800,000 depending on location and sector of the business. They must also prove a minimum investment in their new venture in Ontario, ranging from $200,000 to $600,000, and must own at least 33 per cent of the business.

Other requirements include at least 24 months of full-time business experience in the past 60 months, as an owner or senior manager. There are also benchmark requirements for language proficiency in either English or French.

Applicants must also agree to create one or two full-time jobs for Canadian citizens or permanent residents in the proposed company.

Buying a business

If an applicant is purchasing an existing business in Ontario, they must keep all existing permanent full-time employees and must use at least 10 per cent of their personal investment towards improving or expanding the business in Ontario.

As well, the business being purchased must have been in continuous operation by the same owner for the previous 60 months.

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Perspective™
1464 Cornwall Rd, Suite 5,
Oakville, ON L6J 7W5
1-866-779-7712
info@perspective.ca
perspective.ca

PUBLISHER, CEO Steve Montague
VICE-PRESIDENT Ed Martin
EDITORIAL Meredith MacLeod and Sheetal Pinto

Points system

Entrepreneurs are awarded points under an EOI based on business experience, the investment they will make in the business and personal net worth, human capital factors (including education, official language capacity) and their business concept.

Applicants are ranked in the EOI selection pool and only top-ranked candidates are invited to apply. There is no fee to submit an EOI and registration lasts for one year.

Invitation to apply

Those invited to apply for a nomination must submit a business case and supporting documents within 90 days of the invitation.

There is a $3,500 application processing fee, which applies to both applicants in the case of a business partnership.

Applicants are required to attend a mandatory in-person interview at the OINP in Toronto and must sign a performance agreement that sets out business targets. A letter of confirmation from OINP allows nominees to then apply for a temporary work permit from the Canadian government.

Establishing a business

Applicants have 20 months after arriving in Ontario to submit a report that shows they are abiding by all rules of the OES and the terms of the performance agreement.

If that report is approved, entrepreneurs will be nominated by the Ontario government for permanent residence in Canada.

Detailed requirements of the OES are found here, including a list of ineligible businesses.

KEY SECTORS

In a highly diverse economy, a number of key sectors are at the forefront in Ontario:

- Aerospace
- Automotive
- Chemical and biochemical
- Cleantech
- Cybersecurity
- Financial services
- Food and beverage manufacturing
- Forestry
- Industrial automation and robotics
- Information technology
- Life sciences
- Mining
- Tourism

Seneca HELIX: Creating a better, more inclusive world – one venture at a time

What sets polytechnics like Seneca apart? It's experiential learning—the opportunities to live your future before graduation, be it through work placements, applied research or access to industry-standard labs and equipment.

Or how about an on-campus business and innovation incubator where anyone can develop and accelerate their own venture from scratch? Welcome to Seneca HELIX.

Since 2014, Seneca students and aspiring entrepreneurs from around the world have seen their business dreams become reality at HELIX, which offers free access to incubation space, workshops, mentors and a network of innovators dedicated to their success. The results have been extraordinary.

More than 560 ventures have taken shape at HELIX, and 23,000 aspiring entrepreneurs and intrapreneurs have participated in speaker series, networking opportunities and skills development sessions.

HELIX's success stories include Adebola Adefioye, who founded the Afro Women and Youth Foundation to provide leadership programs for African immigrants, refugees, women and youth. Another HELIXer, Nurjahan Begum, founded the clothes line, Progoti, to raise awareness about exploited garment workers in Bangladesh and to fund life insurance policies and pensions for them.

"Our goals are to illustrate the negative impact of fast fashion and create a safety net for workers in Bangladesh," said Ms. Begum.

Chris Dudley, Seneca's Director of Entrepreneurship, is seeing a growing number of entrepreneurs focusing their efforts on social causes. He is also seeing more women and equity-deserving entrepreneurs exploring opportunities to create businesses. According to the Canadian Government's Women Entrepreneurship Strategy, only 16 per cent of Canadian small and medium-sized businesses are owned by women.

"Currently, women make up 34 per cent of HELIXers , and we want to grow this number by providing additional support and knowledge to help them realize their entrepreneurial dreams," said Mr. Dudley.

To that end, the next phase of growth at HELIX, called HELIX RISE, will provide more targeted support for women and equity-seeking entrepreneurs. This has been made possible through a $300,000 donation from Scotiabank, one of HELIX's longstanding philanthropic partners.

"HELIX Rise will help guide the evolution of HELIX " said Mr. Dudley. "We know that simply creating additional programming is not enough. Every class, workshop, event, coach, mentor, speaker and facilitator must reflect and welcome our whole community."

See where a polytechnic education at Seneca can lead, and learn more about Seneca HELIX: **senecacollege.ca**

Innovation to Impact at the University of Toronto

A legacy of transformative research discoveries

Building on a century of discovery, the University of Toronto is an innovation powerhouse providing the tools, resources and expertise that entrepreneurs need to start, grow and scale their ideas into impactful ventures. With strengths in fields ranging from artificial intelligence and quantum computing to regenerative medicine and cleantech, U of T startups are disrupting industries, creating new jobs, and developing solutions with a global impact.

Over the past 15 years, U of T alumni have launched more than 650 venture capital-backed companies, secured more than $31 billion (CAD) in investments, and created 43,000 jobs. This year, U of T jumped six rankings as the fastest-rising institution for founders globally (PitchBook's Top 50 Global Ranking of best universities for founders, 2021).

Changing the World Through Innovation

U of T has long supported innovators by creating an environment where entrepreneurs and researchers collaborate across disciplines, making research discoveries that are changing the world for the better.

From accelerating drug discovery using artificial intelligence to combatting climate change through cleantech, U of T combines student and faculty research talent, cutting-edge facilities and entrepreneurial expertise that advance regional and national prosperity.

One of the University's areas of focus is addressing the urgent issue of climate change. Its climate-positive plan charts a path to reduce emissions, provides opportunities for every student to be engaged in sustainability courses, and catalyzes inter and multidisciplinary research on climate change.

Helping to put this plan into action is CERT Systems, a company founded by U of T engineering students and faculty which developed a system to convert carbon dioxide into carbon-based fuels before it enters the atmosphere.

"This is a critical time for our planet, and we need innovative solutions that can dramatically slow and ultimately reverse the impacts of climate change," says Christine Gabardo, co-founder CERT Systems Inc. "That's where we come in. CERT is creating and scaling an electrochemical system to convert carbon dioxide into the building blocks of products that would otherwise be derived from fossil fuels. We're proud that our technology will be installed on U of T's St. George Campus, supporting its plan to become climate positive by 2050."

A Dynamic Community Fostering Discovery and Innovation

With experts in fields ranging from medicine and public health to artificial intelligence and information technology, U of T is the place for entrepreneurs seeking to bring their ideas to market.

U of T's extensive innovation network includes numerous entrepreneurship accelerators spread across its three vibrant campuses. These accelerators provide startups with the workspace, tools, mentorship, and the community they need to successfully bring their ideas to market.

"The support of U of T's Innovations and Partnerships Office and entrepreneurship community was integral in helping us commercialize our technology and protect our intellectual property," says Mike Cooke, co-founder of AmacaThera, a U of T startup co-founded by University Professor Molly Shoichet (ChemE, BME, Donnelly Centre).

AmacaThera developed a gel-based technology to dramatically extend the duration of local anesthetics injected at the site of a surgical incision. The U of T startup's discovery could eliminate the need to give patients powerful painkillers following surgery – a key source of the current opioid crisis.

Founded by a team of U of T engineering students and faculty, CERT Systems developed a system to convert carbon dioxide into carbon-based fuels

"As a young company deeply embedded in the U of T community, we have received tremendous support from the university and accelerators, such as UTEST and the Creative Destruction Lab, to build and scale our business," shares Cooke.

Intensive Entrepreneurship Programs That Bring Ideas to Market

Recognizing that commercializing innovations requires more than great ideas backed by world-class researchers, the University of Toronto Early-Stage Technology Program (UTEST) provides startup companies founded upon cutting-edge U of T research with access to intensive entrepreneurial education, advisory support, opportunities to raise capital, and dedicated incubation space.

"The University of Toronto research and innovation ecosystem has played a pivotal role in the growth and success of Deep Genomics," shares Brendan Frey, co-founder of U of T biotech startup, Deep Genomics.

The company, which uses artificial intelligence to find better drugs for genetic disorders to get them into the clinic and to patients faster, recently raised $226 million (CAD) in Series C funding.

"We received early support through U of T's Innovation and Partnership Office (IPO) to help commercialize our technology and were plugged into an incredible network of mentors, investors, and structured programming as a participant in two world-class campus accelerators - University of Toronto Early-Stage Technology (UTEST) and the Rotman Creative Destruction Lab," says Frey.

In addition to proven models such as UTEST, graduate students, early-career researchers, and interdisciplinary teams can tap into Canada's largest internal university research funding program. The Connaught Fund is a catalyst for innovation at U of T. Since 1972, the fund has awarded more than $174.8 million to U of T researchers and innovators dedicated to addressing some of the world's most important questions.

AmacaThera is built on a gel technology developed by renowned U of T researcher Molly Shoichet and her team

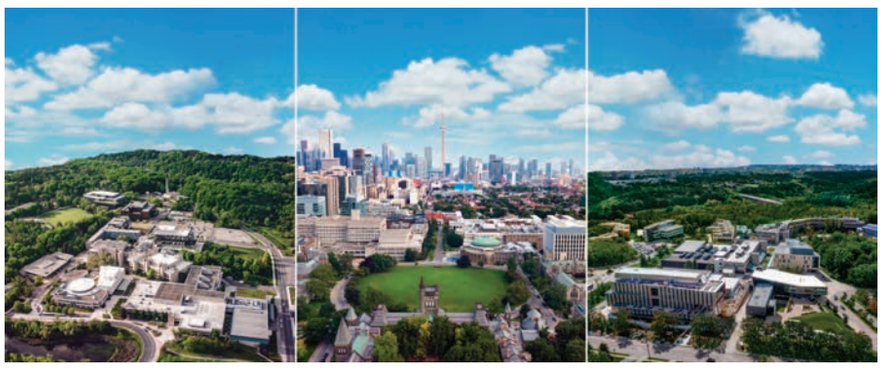
Investing in the Future of Innovation at U of T

The key next step in catalyzing the impact of U of T's research, industry partnerships and startups is the opening of the Schwartz Reisman Innovation Campus, a 750,000-square-foot complex that will enable innovators to collaborate and build new companies. With space for world-leading artificial intelligence scholars, health science experts, and research-based startups, the innovation campus will further anchor Toronto's and U of T's reputation as global innovation powerhouses.

For U of T president Meric Gertler, the future of innovation is bright. "The University of Toronto is home to an incredibly diverse, dynamic and productive ecosystem of innovation, encompassing students, faculty and staff across our three campuses. It's a deeply impressive community, transcending an amazing range of disciplines and collaborating with leaders in industry, business, and the not-for-profit sector. Through their energy, imagination, and drive, they're helping to create jobs and to build a better world, here at home and around the world," says Gertler.

U of T Professor Brendan Frey is the founder and CEO of Deep Genomics, which uses machine learning to develop treatments for genetic diseases

Opening in December 2022, the new Schwartz Reisman Innovation Campus will turbocharge the next wave of Canadian innovation



U of T's three campuses in Mississauga, Downtown Toronto and Scarborough

Hamilton is Where Technology and Creative Workers Want to Live

Municipal incentives, a diversity of office and housing real estate, and an unmatched quality of life are drawing technology and creative companies to Hamilton.

The City of Hamilton's Start-up Office Attraction Program (SOTA) provides interest-free loans for up to 90 per cent of the value of office leasehold improvements within the city's commercial districts and corridors. Both property owners and authorized tenants are eligible.

The hope is to attract both new ventures, but also new incubators themselves.

The program is unique in a couple of ways. If a venture is looking for its first office location after graduating out of an incubator, 10 per cent of the loan – up to $25,000 – can be forgiven. And SOTA applies to locations that are as small as 500 square feet.

"Often these incentives are only available for leases of 1,000 square feet or more," said Judy Lam, manager of commercial districts and small business. "But we know start-ups might need less space when they are early in commercialization. We want them to see a future for themselves in Hamilton."

The city's office stock features plenty of competitively priced classic brick and beam spaces that are coveted by creative, digital and technology companies. And Hamilton boasts one of the best broadband networks in North America.

Hamilton also offers the full gamut of housing options, including rental apartments, condos, townhouses, and single-family homes in core urban, suburban and rural neighbourhoods.

Combined with its quality of life assets, including arts, culture and dining, parks and natural areas, things to do, great architecture, and transit connectivity in the city and to the broader region, the city has no rival, says Lam.

"Hamilton is a true, historic and dynamic city that is the kind of place technology and creative workers want to live, work and play."

The city is seeing increasing interest from companies wanting to establish a hub-and-spoke office model to accommodate employees who don't want to commute into the GTA or want to commute less.

"Hamilton has seen an influx of people relocating from the GTA for a decade and businesses want to establish offices where their talent already lives. Our city is ideally suited to serve as a home for satellite locations."

INVEST IN HAMILTON

HELPING ONTARIO'S TECH INNOVATORS TAKE FLIGHT:

How a global law firm helps fuel growth in the Innovation Corridor

Southern Ontario's Innovation Corridor is among Canada's largest tech ecosystems and home to 15,000+ tech companies and 200,000+ tech workers. Regarded worldwide as a major driver for tech talent and a hub for disruptive emerging technologies, the corridor includes tech giants and a rich network of startups and early-stage companies.

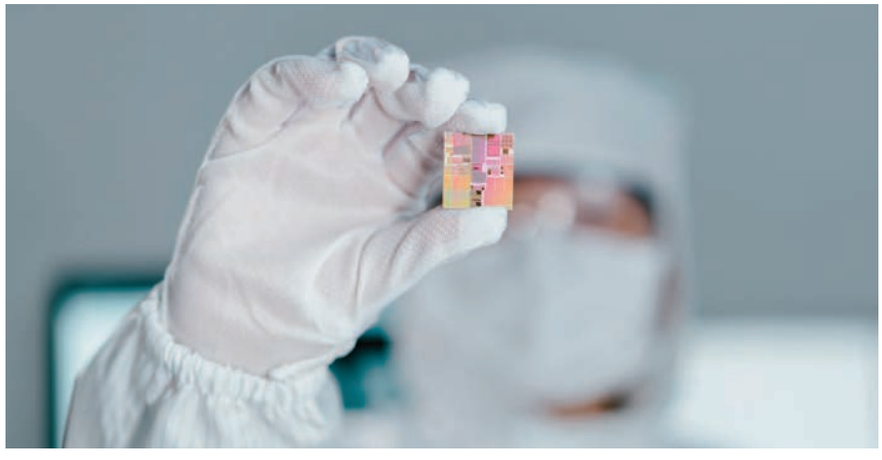
Gowling WLG, an international law firm with offices across Canada and around the world, has a strong presence in the Corridor's key communities of Waterloo Region, Hamilton, and Toronto.

"We've been working in the tech space for decades, partnering with startup companies and multinationals alike to provide strategic legal advice at every stage of their growth cycle. We want to help companies in our communities become the next tech superstar," said Viona Duncan, co-chair of Gowling WLG's global Tech Sector Group, comprised of roughly 300 legal professionals worldwide.

"The Innovation Corridor continues to be a leading tech hub in Canada and beyond. We live and work here too and it's exciting to talk with entrepreneurs and other clients about how we can build this ecosystem with them. Because of our global reach, we also help these clients scale-up and grow internationally," Duncan added.

For Gowling WLG, supporting the success of Ontario's tech companies means staying close to those who are driving progress. The Toronto office has a longstanding presence in the heart of the city's Financial District, where new and emerging technologies including fintech, blockchain and AI are constantly evolving. Earlier this year, the firm moved its Kitchener office to the city's Innovation District, a dynamic hive of tech activity in the centre of Waterloo Region. In the coming years, Gowling WLG's Hamilton office will move to McMaster Innovation Park alongside pioneering research across multiple sectors, from health sciences to advanced manufacturing.

"It's companies that combine innovative business ideas, informed legal strategy, and strong relationships within their community networks that have the greatest chance of succeeding," Duncan said. "Our clients, and the incubators and accelerators with whom we work closely, know we're able to use our global connections, national and local partnerships, and broad industry knowledge to make a real difference for them."



Enedym Inc.'s journey to becoming a global company is a prime example of a tech startup that Gowling WLG has assisted in the Corridor. Enedym enlisted Hamilton's Sacha Babic and his team to support the company's transition from the research lab to the market. Helmed by Canada Excellence Research Chair Laureate Ali Emadi, Enedym is striving to significantly cut the cost of traditional electric propulsion motors and usher in what they call a "new paradigm" in the electric motor industry.

"For companies like Enedym, the potential to disrupt well-established industries is limitless," said Babic. "That's not to suggest the road from startup to global influencer is clear cut. Every company has its own journey, and with that, a unique set of legal hurdles to overcome. That's where we come in: we've seen it all and done it all and it's this experience we bring to our clients."

Earlier this year, Gowling WLG helped bring together a group of investors in facilitating a $15M funding boost for Enedym that will accelerate their entry into the massive global electric motor business. Most recently, the firm helped complete a licensing agreement that forms an exciting partnership with one of India's leading suppliers of automotive electronic products.

"Our teams in the Corridor are just one component of the firm's diverse roster of tech professionals who also span Calgary, Montreal, Ottawa, Vancouver and internationally," explained Babic. "Our collective job is to help position tech entrepreneurs and companies to achieve their goals, from startups to exits and everything in between."

Gowling WLG's Tech Group offers companies a full suite of services, including corporate commercial law, M&A, intellectual property, capital markets, and private equity to help your company take flight.

Connect with Gowling WLG's tech team: www.gowlingwlg.com/tech

Markham: Powering next-generation auto innovation

*Negin Lashkari, autonomous vehicle systems lead at GM's CTC Markham Campus, works on a Lidar (**L**ight **D**etection and **R**anging), which is one of the essential sensors for autonomous vehicle perception.*

Markham, a dynamic, diverse and fast-growing city in the heart of the Greater Toronto Area, is home to powerful cluster of automotive innovation that is bringing the future to life.

Combining excellence as Canada's second-largest technology hub with the presence of a growing number of automotive leaders, Markham brings together world-class talent, a culture of research and collaboration and a reputation as a business-friendly city within a diversified and thriving economy.

"Innovation is our central way of life in Markham, with one of the greatest number of patents per capita in Canada, according to the World City Council on Data. The city has a highly educated and skilled workforce in technology, automotive, life sciences, financial services, design and engineering, science, and information and cultural sectors," said Markham Mayor Frank Scarpitti.

The city is a leader in attracting foreign direct investment, with more than 240 international companies.

The city's automotive sector includes 440 businesses, employing about 6,000 people in parts manufacturing, distribution, wholesaling and dealership, and innovation.

Prominent automotive employers include Honda Canada, Hyundai, Mitsubishi, Tesla, Multimatic, Magna Pullmatic, Weins Canada, NOVO Plastic, Murata Power Solutions, Mobis, Veoneer, NGK, and Racetronix.

On the innovation front, major auto manufacturers are leveraging Markham's technology infrastructure and ecosystem to produce cutting-edge advances in electric vehicles, next-generation self-driving cars, sustainable batteries, green energy, and advanced manufacturing.

Local innovation leaders include GM Canada, Qualcomm and Bluewrist.

And the city's new employment district Markham Innovation Exchange (also called MiX), which connects knowledge to production by attracting high-tech collaborators and manufacturers devoted to future growth, will provide exciting growth opportunities for Markham's advanced auto industry.

MiX's expansive size (1,920 acres), scope and location in the core of Canada's biggest economic region makes it unlike any other industrial park in the country.

GM's Canadian Technical Centre

The Canadian Technical Centre is General Motors' second largest automotive software engineering and development cluster in North America.

Its engineers and software developers in Markham are focused on automated driving, electrification, next-generation infotainment systems, and new technologies for mobility solutions.

"We saw a clear path to innovation and execution in Markham," says Ted Graham, head of open innovation at GM Canada.

In his role, Graham works with start-ups, universities, incubators, and accelerators to further the future of mobility. There is a rich ecosystem in Markham to draw from, he says, and there is ready access to high-quality engineering and software development experts.

Nearly 700 employees belong to the CTC Markham campus, a 150,000-square-foot site that features state-of-the-art labs and innovation spaces.

Key projects in Markham include software development for BrightDrop, GM's technology startup helping decarbonize last-mile deliveries, as well as hands-free driver assistance systems like Super Cruise and active safety features like Lane Keep Assist, which is tested on the CTC McLaughlin Advanced Technology Track in nearby Oshawa.

"The future is zero crashes, zero congestion and zero emissions," said Graham. "That future is closer than many people think."

More at https://www.gm.ca/en/home.html

Advanced robotic guidance solution utilizing Unblink3D Robotics 3D Vision Toolbox to automate wheel installation.

Qualcomm Technologies Inc.

Known for its system-on-a-chip semiconductor products found in billions of mobile devices, Qualcomm Canada is applying that expertise to the automotive sector through its Markham office.

The company, which employs 41,000 people worldwide, has been advancing technology in in-vehicle communications, entertainment and Advanced Driver Assist Systems (ADAS) in Markham since 2009. Qualcomm currently has an automotive design-win pipeline of US$13 billion.

"A big story for Qualcomm is automotive," said Sai-Kit Eng, senior director of engineering operations at Qualcomm Canada.

"We are the No. 1 semiconductor supplier for telematics, automotive connectivity and infotainment systems and a leading provider of ADAS solutions. All the systems that allow you to make phone calls or be navigated by GPS or to play music, all of that comes through chips."

Virtually every carmaker in the world uses Qualcomm products.

Not even a global pandemic has slowed growth at the Markham facility, which grew from 300 to 470 employees over the last two years.

"Markham provides excellent access to government research and development incentives and high-quality opportunities that attracts engineering talent from around the world," said Eng.

"That allowed the creation of a centre of excellence in artificial intelligence and machine learning and automotive applications here in Markham. We believe demand is only going to grow in this space as 5G and artificial intelligence combine to connect vehicles to each other and to the road."

More at https://www.qualcomm.com

Bluewrist

Bluewrist provides 3D-vision-based robotics platforms for automated quality control systems and advanced guidance systems in the automotive sector. It is deploying its solutions around the world to components manufacturers and OEMs, including licensing its proprietary software through a new subsidiary Unblink3D.

Bluewrist platforms use 3D vision and AI to look for defects in welds, surfaces, connectors and fasteners that, if left undetected, could lead to critical safety issues and costly recalls. Vision-based robotic guidance solutions also automate many dangerous and repetitive tasks and help improve factory productivity and output.

"Our technology is leading class and field tested," said CEO Najah Ayadi.

The company was founded in 2006 and has been in Markham for 12 years. Ayadi says moving to Markham was an easy decision.

"Markham is the innovation capital of Canada. It's the Silicon Valley of Canada," he said. "It's also a great place to work, to live, to have fun and to play."

Most of Bluewrist's 50 employees live in the city, which has great connectivity to the region, offers a highly skilled workforce and is home to a strong automotive technology sector, he says.

"We have found many businesses in Markham that want to partner with us."

Bluewrist has been recognized for four straight years as one of Canada's Top Growing Companies, achieving three-year revenue growth of 142 per cent.

More at https://bluewrist.com

Qualcomm

BLUEWRIST ROBOT & VISION SOLUTIONS

Canadian startups need to be first in line for our tech talent

By Abdullah Snobar

How the innovation ecosystem can help startups secure top-quality talent

Talent in Canada has become a hot commodity.

Canadian talent pools are experiencing faster growth than any other tech market across North America. That's thanks to a few factors: the growing number of STEM graduates, competitive post-secondary institutions, globally recognized immigration programs, and a social fabric that is built on inclusivity and diversity. But is it something to celebrate with caution?

In spite of Canada's talent momentum, home-grown startups are facing some serious challenges when it comes to securing tech talent for their own budding businesses. At the DMZ, a world-leading tech incubator located in Toronto, we've had the chance to see first-hand how startups are left at a disadvantage when it comes to landing talent, and how the rise of remote work has only exacerbated the issue even further.

Year after year, finding tech talent is consistently in the top three challenges that founders come to the DMZ seeking support for. And it's not getting any easier.

Today's workforce is no longer bound to a particular city, meaning the competition for tech talent today includes some of the largest corporate companies in the world. And remote jobs aren't the only threat.

Every other day it seems another American tech giant announces plans to open a new office in Canada: Netflix, Reddit, and TikTok, among dozens of others. While it feels like a victory to see big names set up shop, they'll also be eating up Canada's top grade talent. Startups are increasingly recruiting globally to offset this gap, but retaining Canada's exceptional talent in-house allows the ecosystem to remain self-sufficient and competitive.

With the means and resources to make 'irresistible' job offers, recruiting top STEM talent can seem like an impossible endeavour for the little guys.

The innovation ecosystem needs to band together to ensure startups can secure high quality talent. Having the *right* team with the *right* talent is essential to building and scaling successful tech solutions — it's as simple as that.

So, how can the ecosystem help startups as they compete with the behemoths of the tech sector?

The role of post-secondaries

First, students of all ages need to be *hungry* for jobs in the tech startup ecosystem.

Universities and colleges alike play a large role in enticing post-secondary students to pursue careers in startups – it's integral that institutions have a pulse on the innovation ecosystem and encourage entrepreneurial thinking amongst their students.

At Ryerson University, students are surrounded with startup culture, and are commended for entrepreneurial thinking and growth mindsets. The university's foundation is guided by the desire to tackle real-world problems and foster innovative solutions.

While many colleges and universities in Canada have linked incubators and accelerators that encourage students to leap into a startup career, the trajectory from post-secondary to pursuing a career with a startup can be unclear for those who attend institutions that do not have access to the necessary resources or a startup friendly culture.

By molding eager minds to disrupt traditional models and services, students will be able to go on and not only strengthen the startup ecosystem and fill talent gaps, but pioneer new solutions.

Inspiring youth to jump into a startup career

This extends beyond post-secondary education. Secondary education also needs to light a fire in the minds of youth.

Even students as early as elementary can be inspired to tackle societal challenges by harnessing entrepreneurial thinking – it's time to ignite that flame in young Canadians and introduce them to the exciting and rewarding career paths that startups offer.

Recognizing the imperative part secondary students play in Canada's innovation ecosystem, the DMZ has catered programming that challenges young students to think critically and create tech-enabled solutions, and provides new learning tools to teach the latest tech skills.

This includes programs for high school students specifically, and programs that are open to both secondary and post-secondary students — allowing the former to be exposed to what could lie ahead by networking with more mature students who are further along their entrepreneurial journeys.

Nurturing the curiosity of secondary students and providing them with the resources they need to adequately evaluate a startup career is crucial to fostering a talent pipeline for startups.

The opportunity at hand for the DMZ and other incubators and accelerators

Finally, incubators and accelerators have a real opportunity to support Canadian startups in their quest to land talent.

This, in large part, is due to how they are uniquely positioned to provide startups with entirely new pipelines of talent.

As nodes in the ecosystem, incubators and accelerators are often tapped to collaborate with various stakeholders, including the government, private corporations, educational institutions and social profit organizations.

Not only does this allow for incubators and accelerators to have continuous oversight on the different talent programs that the ecosystem offers, but they can see what initiatives *actually* yield long-term results, versus what only tackles the low-hanging fruit.

Incubators and accelerators need to rethink ways in which it can support startups in hiring talent.

Rather than approaching talent support as talent support, the ecosystem needs to look at how talent pipelines can be approached like sales processes. How can startups stay positive in the face of rejection? How can startups sell themselves better to prospective talent? These are the types of resources that need to be provided to founders to better equip them to finesse their HR practises and secure the best talent.

The DMZ continues to rethink creative ways of being resourceful to founders as they look for talent, not just through job boards, but by building strategies and tactics to help support them in becoming alluring places of work. The reality today is that hiring practises need to evolve as quickly as the workforce at large changes.

Albeit a work in progress, the DMZ is committed to ensuring its founders have the resources to land talent now, and evolving its strategies and resources as needed as the times change.

Taking into account the massive shift the workforce has experienced these past 18 months, the way in which startups secure talent needs to also shift. This includes considering virtual employment opportunities and home office costs, childcare benefits to support dual income households, healthcare benefits and much more.

Abdullah Snobar, Executive Director of the DMZ & CEO, DMZ Ventures

Unless startups are working to revolutionize HR through their product or service offering, they will need the support of other organizations to help guide them as they establish their processes.

There's no question when it comes to the value of the startup ecosystem in Canada. The country is seen as a competitive startup landscape that brings in investment and fosters innovation, all while creating the jobs and companies of tomorrow.

Be that as it may, Canada's startup success stories can be boiled down to the same integral components.

Startups require the right team with the right talent in order to build and scale tech-enabled solutions, and as an ecosystem, we all have responsibilities to not only live up to the name we have created for ourselves, but exceed it.

Ontario Universities focussed on accelerating start ups

Across Ontario, universities help nurture the skilled and successful citizens of tomorrow. Equally important for our future is the daily activity taking place at labs and research facilities, where ideas and discoveries are born that will lead to a more productive, vibrant and healthy province.

The results of research and innovation help feed us, save our lives, transport us to work, power our homes, organize our social structures and allow us to communicate with each other. Many of the technologies we have come to rely on – from the smart phone to the MRI and the three-point seat belt – have their origins in research carried out in postsecondary institutions, often in partnership with business and governments.

In Ontario's rapidly-changing economy, innovation is key. During our listening initiative, we consistently heard innovation cited as a crucial element of transformation and growth. Ontarians told us that forward-thinking research, inventions,

technology and science are fundamental to keeping the province competitive and thriving. We also heard that universities need to be a proactive partner.

"When a university can use the tremendous intellectual resources at its disposal to help provide real world, timely solutions to local problems, those solutions can be scaled up and the lessons learned applied to provincial problems," one parent wrote in our survey.

According to Statistics Canada, the higher education sector is the second largest per-former of research and development in Ontario, carrying out an estimated $5.2 billion in work, which translated into 34 per cent of the province's research activities in 2014.

University-generated research partnerships drive an innovative society by assisting in the production of technological breakthroughs that make businesses more competitive, produce new ideas and data that shape better policies, and generate solutions to local and global issues.

Ontario universities are involved in collaborative research projects that aim to improve lives across all areas of business and society: for example, reducing the harm of oil-and-gas industry flaring, examining new medical uses for wearable technology, looking at ways of making commercial cross-border traffic between Canada and the U.S. more efficient, developing synthetic probiotic treatments to combat the C.difficile virus, and working with police forces to improve officers' use-of-force decision-making during confrontations.

Further partnerships with private- and public-sector stakeholders are vital in order to produce research that has quantifiable, positive effects on the province.

As Rick Huijbregts, then-VP of Digital Transformation and Innovation at Cisco, said at our Roundtable on Innovation and the New Economy: "Innovation doesn't only happen in your or our R&D departments. Innovation happens everywhere. We can make the transformation only work when we collaborate between the private sector, academia and government."

The federal report delivered by Canada's Fundamental Science Review panel (the Naylor Report), which called for more funding and improved support structures for research and innovation, underlined

the crucial role played by postsecondary research in "investing in the future."

"When quantum physics and relativity were born in the early 20th century, no one could have predicted the array of innovations that would result many years downstream – innovations as varied as the transistor and semi-conductors, solar cells, rechargeable batteries, the laser, the integrated circuit, the personal computer, the Internet, medical imaging, flat-panel high-definition televisions, satellites in orbit, and the BlackBerry, to name but a few," the report said.

In this spirit of discovery, collaborations across the province between university researchers and business and community partners are driving innovation in artificial intelligence, quantum computing, nanotechnology, clean energy, medical and health research, social sciences, and many other fields.

However, the positive effects of research can't find their way into the community unless the ideas and inventions born in labs can be turned into real-life products and solutions. Leaders from the technology sector have emphasized to us that Ontario needs to do more to ensure its research is commercialized and goes to market. A 2015 innovation report card from the Conference Board of Canada gave Ontario good marks overall, but said it "might be facing challenges commercializing and reaping the larger benefits of innovation."

Promoting the commercialization of research requires coordinated work. It requires the combined efforts of universities, businesses, government, accelerators and investors to support projects from the development phase through to product creation and distribution to the customer or end-user. In the case of ideas-based research in areas such as traffic management or health policy, "commercialization" means ensuring it is seen and adopted by decision-makers and service providers.

A thriving and livable Ontario in 25 years' time will in part depend on the innovations that universities and their partners are working on now. We are committed to developing the research partnerships to produce the concrete, actionable innovations that will help ensure a dynamic future

Embracing digital transformation is less about technology and more about people

Written by: Kelly Anderson

President and CEO of Conservation Halton, Hassaan Basit, might not be a name that springs to mind when thinking about leaders in digital transformation.

But it should be.

As a trained biologist and environmental proponent, Basit admits his sector has lagged in adopting technology, but explains this is the area where he has made leaps and bounds over the past year and a half.

"Although we knew we needed to embrace digital transformation and it was a part of our strategic plan set out a number of years ago, the pandemic really necessitated innovation and kicked us into action. Having to shut down our parks when our region initially went into lockdown invoked a gut-wrenching emotional reaction in our whole team. We needed to solve the problem of providing safe and equitable access to nature for everyone in the GTA. We needed to get people back outside again, but not waiting in cars along the side of the road for parking spots to open up at our parks. So, we embraced innovation and took a risk."

Basit worked with a small local Canadian startup to introduce technology that allowed Conservation Halton to open up and control capacity in its parks, and on its trails and ski area. In just a few months an online reservation system was operational, along with electronic gates on-site with smart cameras to recognize licence plates, and sensors to monitor capacity on trails.

"We wanted a system that would buffer against the ups and downs of the pandemic and also ensure an excellent experience for users. We wanted the reservation process to be fast and easy, and avoid lineups to get into the parks and trails."

The leap into technology paid off beyond Basit's expectations. Since implementation in the summer of 2020, lineups have been completely eliminated from all parks and visits have grown from 1 million per year with overcapacity issues to 1.5 million per year with zero capacity issues.

"What started out as needing to open parks has turned into continuous and evolving digital transformation that's changing the core of how we operate. We're now using data analytics to figure out optimal timing and visitor slots, adapt for weather, forecast flooding for optimal operation of our dams, and target specific customer segments with offers that we know they'll like. We're now introducing AI to automate everything over the next 12 months. The technology allows for more equitable access to nature while also helping us get the balance right to protect the environment."

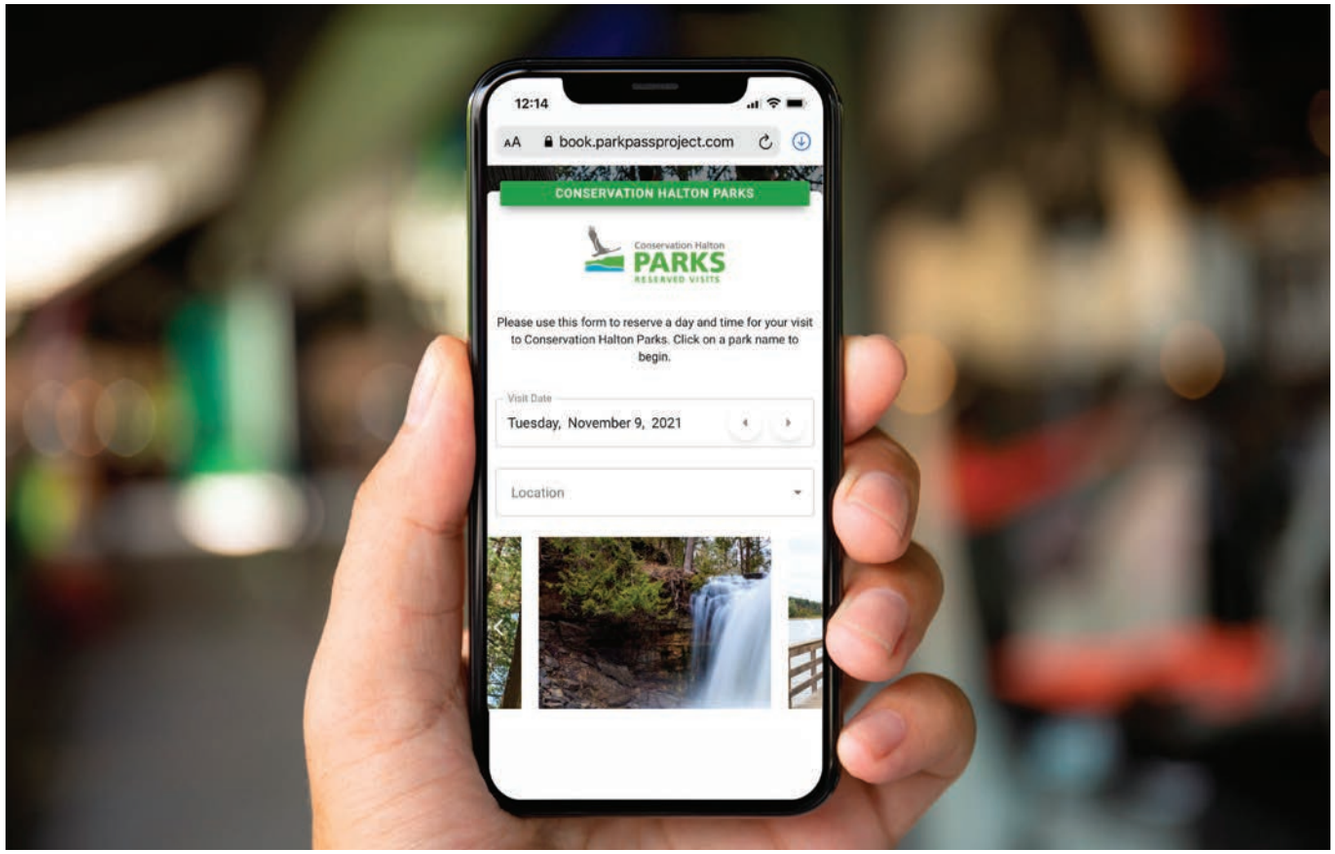
Basit says this massive shift required a cultural change in the organization. "We needed to embed technology into all of our processes to make this work, and we needed everyone – from operations to marketing to management – to get on board. We received feedback from staff and customers, and we assured staff that technology wouldn't take away their jobs, but instead help them shift their time to the parts of their work that they enjoyed the most. We've embraced the fact that we need to leverage technology to be relevant over the coming years."

The focus on people as the key part of the technology revolution was something Basit learned while he was a student in the Executive MBA in Digital Transformation program at McMaster University's DeGroote School of Business. "We spent a lot of time looking at why companies fail as they go through digital transformation – and they don't fail because of the technology, they fail because of the people. Organizations need a structure that is agile, open to change and that embraces tech and data-driven decisions."

Milena Head, academic director of the Executive MBA program and professor of information systems at DeGroote, agrees.

"Leaders in organizations often fear that technology is something they can't understand and therefore will make them

Hassaan Basit, Chief Executive Officer, Conservation Halton
Photo credit: Conservation Halton



Conservation Halton Park Pass reservation system
Photo credit: Conservation Halton

> "We have a fantastic ecosystem of innovation and technology here in Canada. If leaders don't embrace it, they may soon become obsolete."
> **– Hassaan Basit, CEO Conservation Halton / Executive MBA in Digital Transformation '19, DeGroote School of Business**

irrelevant. But it actually provides them with the insights to make better decisions and become even more relevant to their customers and stakeholders. We created the Executive MBA program to teach leaders how to understand data and how it can improve value creation – and how to build confidence in communicating the value that technology can provide."

Head says that digital transformation is all about understanding people and changing mindsets to see the value in data-driven decision-making.

"Technology and how we use data is always evolving – now more rapidly than ever. The need for technology-driven autonomous business and operating models is continuously increasing – in every field and every industry. Leaders who learn how to use data to better understand their customers, employees and stakeholders will be better able to stay agile and meet expectations. There's so much competition on a global scale, and companies must meet rapidly changing expectations to deliver on what their highly sophisticated customers want. To do that, it's essential to learn how to manage digital systems and lead complex and diverse teams in digital environments."

As Basit has figured out, it involves taking a customer-centric approach. "Embracing a whole new complex combination of technological solutions has allowed us to understand our customers better than ever before, and provide them with more customized, quality experiences. Investing in digital transformation was risky and required a cultural change to become agile and nimble, but it has had tremendous benefits. We have a fantastic ecosystem of innovation and technology here in Canada. If leaders don't embrace it, they may soon become obsolete."

A Global-first Approach at the Heart of Ontario's Innovation Economy

When you think of Ontario's innovation economy, one thing comes to mind – entrepreneurship.


TD Sustainable Future Lab Workspace

Accelerators Centre HQ

Specifically, Waterloo, Ontario is home to the province's top tech hubs and hundreds of thriving startups.

At the heart of that innovative community is Canada's top entrepreneurial support hub, the Accelerator Centre (the AC). Ranked by UBI Global as Canada's #1 private business accelerator and recognized among the top 5 such organizations globally, the AC is a hotbed for innovation and a gateway to global talent and international markets.

In June of 2021, the AC embarked on a refreshed strategic vision to activate the innovation economy by catalyzing startups, industry, and academia. The new roadmap takes a unique "global-first" mindset that will see the innovation hub bring the magic of Waterloo to the world and attract the world's best founders, investors, and ideas to Waterloo.

Why Ontario Founders Need to Think Globally from Day One

The world has changed. Over the last two decades the internet has powered business to become democratised. Over the last decade, the gig economy has accelerated this democratisation. And in 2020 spurred by a global pandemic, digital transformation further accelerated this growth. Today, we are more connected than ever before.

As a result, launching and scaling the next Canadian unicorn requires founders to have a plan for acquiring market share, scaling, and remaining competitive globally. To achieve this, founders need to abandon the "think small to get product market fit" mentality and adopt instead a "global-first" mindset that ingrains the global market and global opportunities into the DNA of their startup.

"It is all about market size and access to capital," says AC CEO Jay Krishnan. "Ontario-based startups can, and should, stay in Ontario. But that doesn't have to mean losing out on the opportunities, resources, and market share the rest of the world has to offer. Today's investors, capital, and markets are global. It is easier than ever before to access those resources from anywhere in the world. Tapping into that network and the opportunities the global innovation community has to offer is essential. That is why our strategic roadmap focuses on creating a full-stack hub with a global approach—bringing the best of Waterloo to the world and the best of the world to Waterloo."

The Ingredients of a Global Innovation Hub

Strong Community

Even in a global world, local matters. Waterloo is world-renowned for its talent pool. Home to top academic institutions like the University of Waterloo (UW), Laurier, and Conestoga College, the post-secondary community within Waterloo has fostered a deep and diverse pool of cross-functional talent with an eye on entrepreneurship. This density of entrepreneurial-minded talent provides the AC with a strong funnel of high-impact, big ideas, and founders who are ready, willing, and able to take on those lofty challenges.

Pathways of Acceleration

Solving big problems, making a big impact, and bringing big ideas to market requires clear and structured pathways to acceleration. Traditional entrepreneurial support programs address innovation from a lens of startup supply, meaning they find founders and startups that need support and help them succeed. The AC's approach to acceleration also addresses innovation from the demand side, looking to identify new industry challenges, curate founding teams, and create programs that rapidly address real-world challenges and provide accelerated pathways to market.

Access to the Global Frontier

Building networks and plugging into all the resources the global innovation community has to offer is an essential part of the AC's strategy to build a global-first, full-stack startup hub. We believe that Waterloo Region is the best place to start, shape, and strengthen your company. Our Global Frontier programs bring Waterloo to the world for local startups, connecting you to new markets and funding sources. For international entrepreneurs or emerging innovation hub leaders, our programs connect you to the magic of Waterloo, giving you platforms to tap into our proven capabilities through our Global Hubs program and Startup Visa program.


Jay Krishnan

As Ontario's innovation economy continues to grow, impactful accelerators like the AC will continue to inspire entrepreneurship, enable success, and facilitate global impact. Supported by a deep and diverse network of domestic and international partners, the AC will continue to be the centerpiece of Ontario's strong and growing tech community. To work with the AC or inquire about how you can partner with Canada's #1 private business accelerator, contact info@acceleratorcentre.com or visit www.accelratorcentre.com.

accelerator centre

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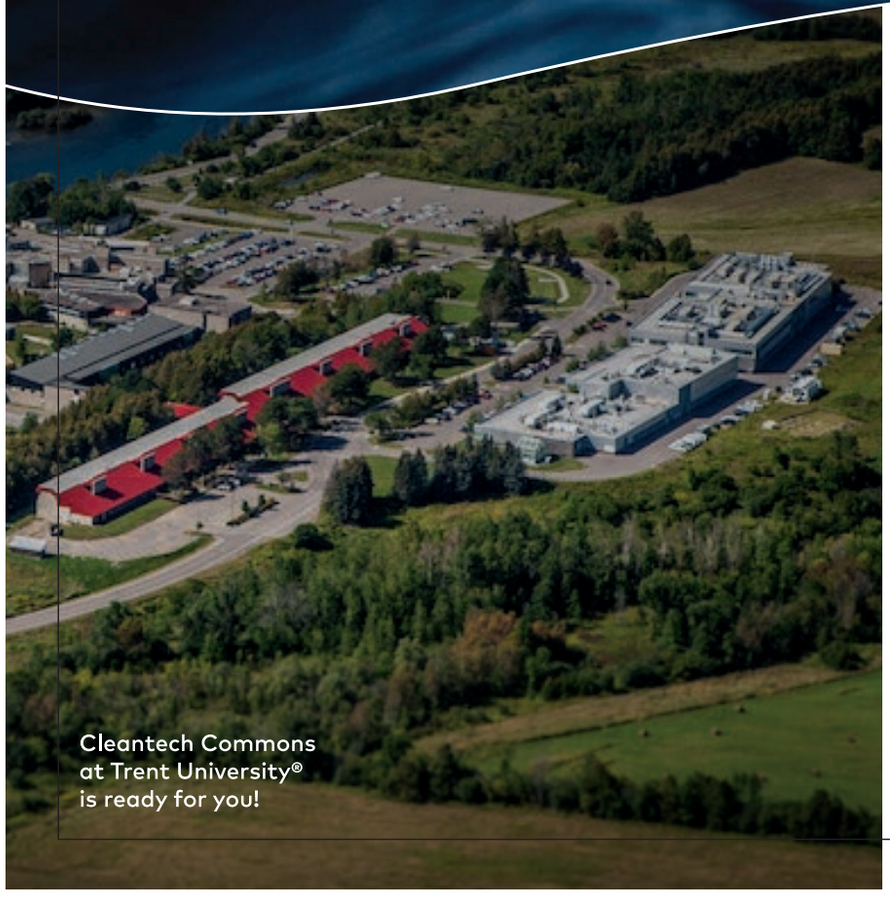
#2 CITY IN CANADA FOR WATER TECH STARTUPS*

Peterborough & the Kawarthas is a region that has been shaped by three things: Innovative minds, a commitment to sustainability, and a connection to water.

*Water Canada



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For more information about cleantech investment opportunities in Peterborough & the Kawarthas, please contact Suzanne McCrimmon, Director of Business Development for Peterborough & the Kawarthas Economic Development at smccrimmon@peterboroughed.ca.

Love Kingston Marketplace

A Healthy Market for Investment

Twenty-two research centres. Eight distinct healthcare providers. Leading post-secondary institutes, incubators, and innovation infrastructure.

The healthcare system in Kingston is a powerful and diverse web that keeps locals healthy, provides great jobs, and creates great investment opportunities for businesses and investors.

In fact, the timing has never been better for healthcare businesses seeking to establish themselves in the Limestone City. With an aging population, and the challenges posed by COVID-19, the Canadian federal government and local city government have recognized the time right to bring these valuable healthcare resources even closer together by establishing an ecosystem in Kingston.

"We have a serious healthcare cluster that starts at health policy and continues on to education, hospitals, research, and health companies," said Craig Desjardins, Director, Office of Strategy, Innovation & Partnerships at the City of Kingston. "The human capital infrastructure of researchers and graduate students in particular – in health sciences but also in other STEM disciplines like physics, chemistry, and computer science – are a huge asset to our community and this is a cluster focus we've chosen to grow."

In January, Kate Young, Parliamentary Secretary to Canada's Minister of Economic Development and Official Languages, announced $3 million in FedDev Ontario funding to establish this ecosystem project. The ecosystem will unite the City with Queen's University and some of its major research centres and incubation programs, St. Lawrence College, Kingston Health Sciences Centre, and GreenCentre Canada.

The funding is intended to help grow local health jobs and attract new businesses to Kingston; bring innovative technologies to the hospital floor more quickly; develop incubator programs for healthcare and life science businesses; and expand commercialization pathways to nearby Syracuse, New York; among other related initiatives.

In addition to welcoming and growing new businesses, existing healthcare innovators in Kingston will benefit from this new investment.

Archeoptix Biomedical Inc. was founded in Kingston in 2014 with a goal of commercializing research around the detection of brain bleeds. Their portable devices can detect a brain bleed in under three minutes, providing

Tim Forbes/Forbes Photographer

medical professionals with immediate insight into a patient's condition. The device is approved by Health Canada and the company is currently working on approval to sell their device in the United States and Europe.

"Kingston is a great place to do business due to its proximity to Toronto, Ottawa, Montreal, and the States," said Sav Stratis, Archeoptix's president. "There is lots of talent here in Kingston and, over the coming years, we plan to add to add to our team and create jobs."

Archeoptix is not the only health company thriving in Kingston. Octane Medical Group was already full steam ahead with its diverse product lines before COVID – now, they're renovating and expanding their Kingston headquarters with the pandemic having accelerated their growth.

Octane was founded by Timothy Smith and Ian Grant in 2007. It's Smith's sixth company in the medical space. The group unites several distinct technologies and a wide breadth of expertise including tissue engineering, spinal reconstruction, nuclear imaging, and bioactive implants.

"Ontario is extremely well positioned for those looking to start a business and commercialize inventions due to its intellectual capital and high calibre of training," said Smith. "The provincial and federal programs to support companies like ours are as good as any in the world from my perspective. Kingston in particular benefits from its academic institutions, and its many sources of potential collaborations and its resources for highly specific experimental analysis."

Octane's and Archeoptix's stories underscore not only the talent and funding advantages of locating your business in Kingston, but also the reasons companies stay. Desjardins, Stratis, and Smith all noted the strong quality of life and business opportunities that come part and parcel with Kingston's central location, the presence of leading post-secondary institutions, and its proximity to major markets. These factors, among other, led to Kingston being named the world's top small city for foreign direct investment by the UK's Financial Times.

"The ecosystem we've built here has been recognized as a rising star, as these companies increasingly recognize there's value in going where research is happening and where talent is grown and trained," added Desjardins.

For information on opportunities in Kingston, contact Shelley Hirstwood at hirstwood@kingstoncanada.com.

ADVANTAGE BRANTFORD

A progressive community for families and businesses in Ontario

"Conveniently located along Highway 403 within an hour of the GTA, Brantford is dedicated to promoting economic diversity, quality employment opportunities and efforts to enhance the quality of life of all its residents. Brantford's City Council is committed to working collectively with all levels of government to pave the way for new business in Brantford."
– Brantford Mayor, Kevin Davis

One of Canada's Best Locations to Invest and Grow

In 2021, *Site Selection Magazine* recognized Brantford among 20 local and regional groups as "Canada's Best Location", and for good reason. Located in Canada's economic heartland along the picturesque Grand River, Brantford offers a vibrant atmosphere for residents, visitors, and businesses.

Founded in 1839 by Mohawk leader Captain Joseph Thayendanegea Brant, Brantford is now renowned as the "Telephone City" crediting Alexander Graham Bell's invention. Self-proclaimed by Bell as the "dreaming place", Brantford continues to be a progressive community full of innovation and opportunity.

Living in Brantford

Whether you are looking for elegant living in a cutting-edge condominium such as One Wellington or you prefer a country home on the outskirts of town, Brantford offers something for every taste. With just over 100,000 residents, you can enjoy the bustling downtown core with hometown hospitality or tread off the beaten path to enjoy nature.

Explore world-class entertainment options, shop at unique boutiques, taste your way through the city, and be sure to brush up on our local history at one of our many museums and galleries.

In 2020, MoneySense Magazine praised Brantford as being one of the top 10 best places to buy real estate in Canada for the sixth consecutive year. The city has since seen an influx of residents relocating from surrounding areas bringing with them in-demand skills and thriving businesses.

Establishing a Business

Brantford's strategic location enables businesses to reach major North American markets. Easy access to major highways, railways, cargo and passenger aviation systems, and extensive inland and international marine shipping facilities, makes Brantford an ideal location for manufacturing and shipping.

In 2021, many established businesses are choosing Brantford as a region to expand or relocate their operations. The region has become particularly attractive to a number of manufacturing and food production companies.

Contact Us

For more information on investing, living, and working in Brantford, please visit AdvantageBrantford.ca or email advantage@brantford.ca or call 519-751-9900.

Fueling Canada's Innovation Economy.

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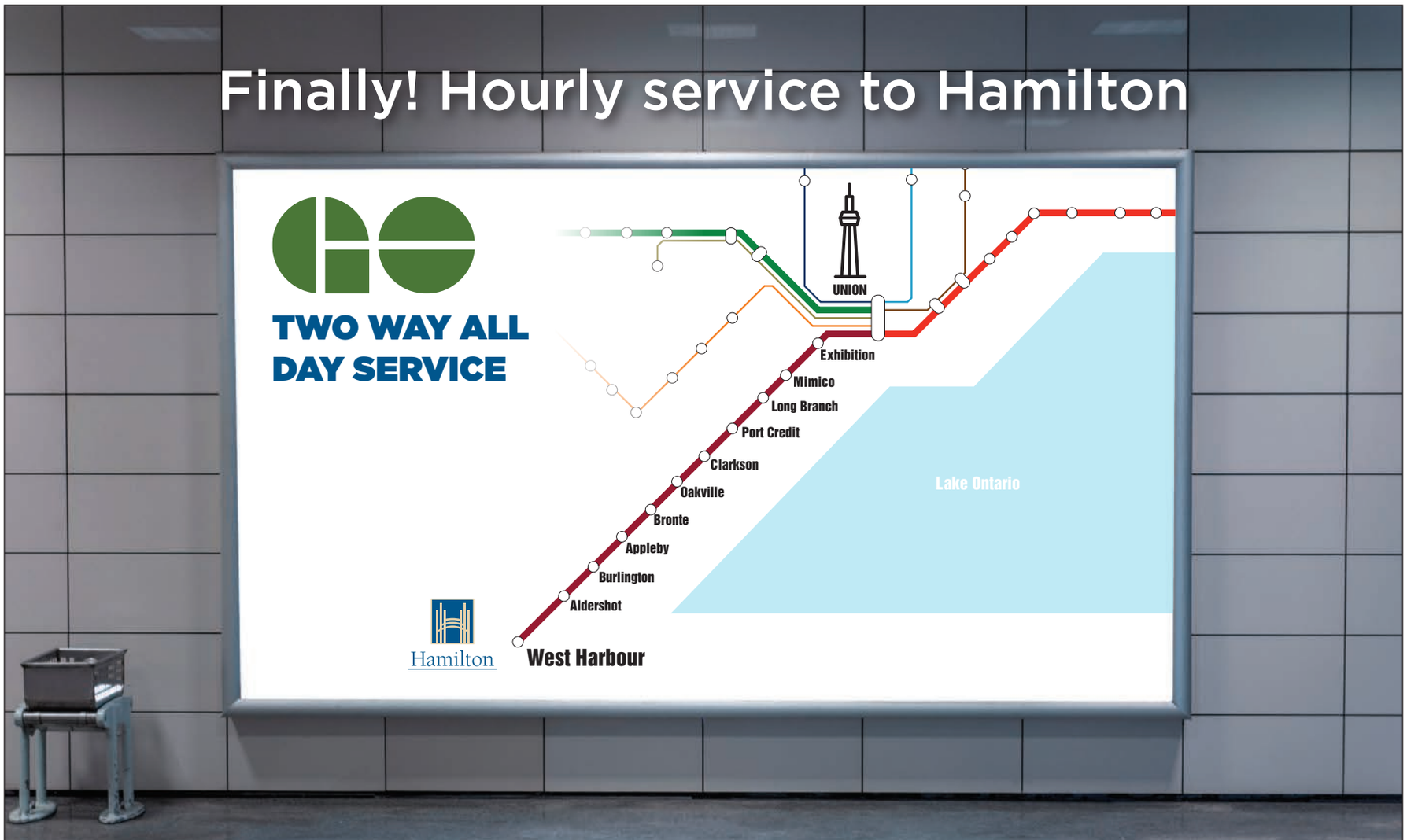

And once you make that trip in, Hamilton's downtown core offers:

- Funding for Start-ups/scale-ups Graduating From Incubators Looking for Their First Office Space
- Classic Brick and Beam Office Space
- Diverse Housing Options
- One of the Richest Broadband Networks in North America
- Access to Great Tech Talent
- Top-Class Dining Experiences

INVEST IN HAMILTON

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