# Perspective ONTAR ADVANCED MANUFACTURING SECTOR

DISCOVER ONTARIO'S GROWING SKILLED TRADE CULTURE

A HIGHLY EDUCATED AND ADEPT WORKFORCE GLOBAL AEROSPACE & DEFENCE FIRMS MAKE THE SMART CHOICE .....

PARTNERING WITH ONTARIO ACADEMIA FOR R & D. LEADING THE WAY ENERGY TECHNOLOGIES, SOLAR, H2 & BIOFUELS

TURBOCHARGING CLIMATE TECH IN ONTARIO

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# HAMILTON ONTARIO CANADA

# MANUFACTURING CANADA'S FUTURE

# MANUFACTURING GIANT

For well over a century, Hamilton has led Canada's manufacturing industry. Long known as a hub for steel, metal, and food production, this skilled workforce is now leading 21st century opportunities in green manufacturing, decarbonization technologies, and environmental stewardship.

# GOODS MOVEMENT LEADER

Hamilton is a true multi-modal city- enjoying all four modes of transportation (road, rail, air, port). The city is at the epicenter of the densest concentration of economic activity in Canada and strategically located less than an hour from Toronto and the US border.

# COLLABORATIVE COMMUNITY

Leverage Hamilton's access to skilled talent, state of the art research and innovation centers, and financial support from all levels of government.









# UNLOCK A WORLD OF ADVANCED MANUFACTURING OPPORTUNITIES IN ONTARIO, CANADA

The Ontario Canada advanced manufacturing sector, which includes the fields of robotics, 3D printing and ICT technologies, benefits from one of the best research and development (R&D) environments in the world along with a readily available wealth of talent. As a global leader in system integration, artificial intelligence (AI), sensors, machine vision and automation, Canada facilitates the seamless integration of Industry 4.0 solutions into manufacturing operations.

Ontario is experienced in capitalizing on the advancement of manufacturing through its world-renowned access to talent, and integration of industry solutions. Foreign investment has been drawn to Ontario for those reasons, spurring growth and allowing manufacturers the opportunity to expand their capabilities and invest in innovative technologies like AI, robotics, 3D printing, sensors and machine vision. Ontario's manufacturing sector ensures that technology applications are used to maximum efficiency while providing a variety of competitive advantages.

# How the Sector is Driving Economic Growth and Creating Job Opportunities

Ontario's manufacturing sector is home to a diversified range of industries. Everything from automotive, technology and aerospace can be found in Ontario.

The diversity of Ontario's economy enables it to attract foreign investments, expand its markets, and invest in new technologies. The Province has a unique and stable business climate that continues to draw investors from around the world. With highly-skilled workers and advanced infrastructure, Ontario's success is powered by its bold vision and relentless drive for innovation.

#### How Businesses can take Advantage of Incentives and Tax Credits to Invest in Manufacturing Projects

Ontario offers businesses a wide range of investment opportunities, with incentives and tax credits that can help them expand. Companies of all sizes have used these programs to create jobs and increase foreign investment in key areas like manufacturing.

Ontario leads the world in research and development, supported by many government funding programs for businesses to invest in innovative projects. These initiatives provide valuable assistance for startups and well-established organizations alike to explore new markets, develop revolutionary technologies, and successfully implement their projects.

By taking advantage of Ontario's attractive investment opportunities, businesses of any size can significantly reduce risk while expecting an impressive return on their investments.

#### Skilled Labour Pool – Talented Workforce with Access to Resources for Training, Research and Development

Ontario offers a skilled labour pool that provides businesses with access to domestic and foreign investment resources for training, research and development. With the availability of these resources, Ontario businesses can easily expand their knowledge base and increase workforce capabilities. Furthermore, this initiative enables Ontario to attract more foreign investments from companies looking to invest in advanced economies that can provide quality training and R&D programs.

Ontario's talented workforce is an opportunity not to be missed by modern businesses with ambitions of innovating or taking on higher levels of advanced skillsets.

#### Supporting Innovation and Growth – Canada, specifically Ontario Ensures it will Remain Competitive in the Global Economy

Ontario is leading the charge when it comes to supporting innovation and growth in the global economy. There are several measures being taken to ensure that Ontario businesses remain competitive, such as increasing foreign investment to expand market reach and encouraging businesses to invest in new infrastructure and technologies.

These efforts have made Ontario one of the most attractive places for companies looking to grow their business in a fiercely competitive environment. With Ontario's commitment to fostering innovation and growth, the province has become an ideal destination for those with ambitious plans.

With a rich industrial history in innovation, Ontario is fast becoming a hub for advanced manufacturing. Their government's support of the industry and its commitment to research and development has made the region a great place to pursue the development of Industry innovations, with businesses of all sizes embracing cutting-edge technology.

As such, Ontario provides an ideal platform for companies to leverage this powerful sector and utilize breakthroughs in automation, machine vision and artificial intelligence. This continuing investment in advanced manufacturing promises to bring much-needed jobs and opportunities to the province while ensuring Canada remains at the forefront of global competitiveness and innovation throughout the coming decades.

### Perspective™

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# **OPPORTUNITY AWAITS...**

Halton Hills is the perfect location for investors seeking access to major markets, unsurpassed quality of life, and a stable and competitive business environment.

### INVESTHALTONHILLS.COM



# INVEST HALTON HILLS – ROOM TO GROW. Room to breathe.

Halton Hills is located within the larger Halton Region – a Region that is home to over 1,000 manufacturing firms and 250 engineering and automation firms that support Ontario's growing advanced manufacturing cluster. Halton Hills enjoys a diverse and concentrated manufacturing base that includes leading technology companies, a highly skilled workforce, and over 20 world-class research and educational facilities within an hour drive.

From fabricated metals to sophisticated machinery and equipment, to food and beverage, to plastics and automotive, Halton Hills continues to attract leading manufacturing companies who are poised to take advantage of the Town's strong strategic position and easy access to the United States market.

Halton Hills is located on the west-side of the Greater Toronto Area (GTA) and is closely integrated with the GTA market and labour pool. The Town is also situated directly along Canada's Innovation Corridor that runs from Toronto to Kitchener-Waterloo, and within Ontario's Automotive Corridor running from Oshawa to Windsor. Halton Hills is approximately 40 minutes from Toronto's Pearson International Airport, offering daily flights to major U.S. destinations. Local firms also benefit from proximity to the ports of both Toronto and Hamilton for water access.

Given the Town's strategic location within the centre of overlapping Advanced Manufacturing segments, over 100 firms already take advantage of Halton Hills' central location, with the local manufacturing sector representing the Town's second largest industry by employment.

Halton Hills is the perfect backdrop for international firms seeking access to major markets, a stable and competitive business environment, and unsurpassed quality of life. Given the Town's size, Economic Development staff regularly interface with employers while providing a high level of customer service. Staff take pride in maintaining strong relationships and take aftercare very seriously. Halton Hills' investment value proposition appeals most to international firms that understand the inherent benefits of locating within a similar-sized community.

With a unique mix of both urban and rural features, Halton Hills maintains a "small-town feel" despite its central location and proximity to Toronto. The

Town strikes the perfect balance between urban and rural living – and is known for a superior quality of life that attracts employers, families and a highly skilled workforce. Furthermore, Halton Region has consistently been rated as the safest community in Canada for 10 years.

Halton Hills' Premier Gateway Industrial Area is located along Ontario's major provincial highway network and will account for over 90 percent of the Town's forecasted employment growth for the next 20 years. There will be over 15 million square feet of developable, designated employment lands coming online in the Premier Gateway over the next five years – a rare opportunity in the GTA.

In order to realize key strategic investments and ensure smooth communications through a single point of contact, Halton Hills launched their Business Concierge program in 2021. The Business Concierge program operates with a "can-do" approach and provides customized white-glove service to help fasttrack approvals of development projects and streamline the processing of major investment opportunities.

The lifestyle, pace and diversity of Halton Hills never fail to impress first-time visitors. With three Conservation Areas, over 30 parks, an exceptional network of trails for hiking and cycling, and a rich arts and culture sector, Halton Hills is one of the best places to invest, and live, in Canada.

From the moment we contacted the Town, Halton Hills staff were engaged, enthusiastic and genuinely interested in helping us succeed with our property procurement. From the Business Concierge as well as all Town staff involved, your assistance has been paramount in overcoming some of the significant hurdles we faced obtaining a suitable site for our future expansion. Staff were able to assist in coordination with external agencies and in obtaining information that was required to move forward with the purchase; all this during an extremely tight due diligence timeline." – **Conestoga Cold Storage** 



# **DISCOVER THE POWER OF ROBOTICS & AUTOMATION** IN ONTARIO'S MANUFACTURING SECTOR

In today's modern world, advances in robotics and automation are changing the way many industries do business. This is particularly true for manufacturers, who have begun to rely on these technologies to drive efficiency and reduce costs.

Around the globe, Ontario is seen as a leader in this wave of innovation thanks to its aggressive adoption and implementation of new technologies across multiple sectors. For business owners looking for ways to increase productivity while controlling expenses, it can be beneficial to look at how Robotics and Automation are being used in Ontario manufacturing.

### Robotics at Work – Time to Move your Manufacturing to Ontario

Ontario is leading the way in industrial automation and robotics. The provincial government has invested heavily in this sector in recent years, resulting in increased foreign direct investment, more jobs and higher wages.

Automation and robotics are not only being applied to manufacturing processes but they are helping drive research and development, business operations, government services, education and health care. This progressive move towards automation empowers businesses to maximize their resources. As innovation increases so do opportunities for commercialization of Canadian products that could benefit not only Ontario's economy but also the nation as a whole.

### Ontario is Home to Next Generation Research

With its strong infrastructure and support for automation, Ontario is the ideal environment in which to conduct robotics research and innovation. Not only does the province offer foreign investment incentives to assist businesses in automation projects, but it also has a flourishing education sector trained in artificial intelligence and engineering, a skilled labor market with expertise in robotics precision assembly, and an entrepreneurial spirit that drives some of Canada's most productive robots users.

All this combines to make Ontario an ideal place for innovators in robotics research to establish themselves and work towards developing innovative solutions that can be widely used throughout the world.

### Ontario's Education System of Global Standard is an Excellent Match for the Advancements in Manufacturing Automation and Robotics

Ontario is becoming the industrial engine of Canada, providing the perfect backdrop for ambitious projects employing automation and robotics.

The province's world class education system means it is well poised to benefit from foreign investment in technology and automation, helping to create strong foundations for its manufacturing sector. Recent advancements in robotics and automation have allowed Ontario companies to be some of the most efficient in North America with businesses introducing new ways of producing goods driven by artificial intelligence.

Its advanced training systems mean that Ontario workers are able to quickly hit the ground running when these technologies are implemented, meaning greater profits for business owners.

- 24 of the province's colleges offer automation and robotics-related programs
- 14 universities offer industrial engineering degrees
- Four universities offer mechatronics programs
- Apprenticeship programs for more than 150 skilled trades in multiple sectors, including construction, manufacturing and automotive

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### **Industrial Automation and Robotics**

Ontario's large and diverse manufacturing landscape, combined with it's worldrenowned R&D capabilities, make it a prime destination for both domestic and foreign companies looking to invest in automation and robotics.

Already, there is more than 350 automation and robotics-driven companies that operate in the province, creating countless job opportunities and plenty of supply chain advantages. This fusion of industry-specific services has created an exciting business environment that seeking investors should take full advantage of. Simply put, the technological progress or automation and robotics advancement found in Ontario makes it the perfect place for companies to innovate.

### **Aerospace Sector**

With a century-long history of excellence in aerospace, Ontario is a natural destination for businesses looking to invest in and reap the benefits of the industry.

Ontario has pioneered the way with innovative solutions to everything from foreign investment opportunities to automation and robotics, thus providing an ideal environment for any business seeking to reach new heights. Its focus on building strong connections throughout the global industry makes it well positioned for success – ready for companies to take their business soaring.

### **Automotive Sector**

Ontario is at the heart of a dynamic automotive hub that attracts foreign investment and boasts some of the most advanced automation technologies in the world. The province is home to over 700 parts suppliers and 500 tool, die and mould makers located within its 400-kilometre automotive corridor. This robust supply chain made up of industry leaders has created an environment which puts Ontario at an advantageous position when it comes to modernizing factories with the latest automation technologies such as robotics. This helps workers improve their skills while maintaining their cost competitiveness in an everevolving environment.

# **Chemical and Biochemical Manufacturing**

Ontario is well established as a hub for chemical manufacturing, with 40% of Canada's total production generated in the province. Of the top 15 leading global chemical producers, nine have chosen Ontario to invest in and expand their operations due to our strategic central location.

As technology advances, this industry has embraced automation and robotics at an ever-increasing rate, leading to improved safety and efficiency standards. With continual support from government initiatives – such as research funding – Ontario remains a prime destination for foreign investment in chemical manufacturing globally.

All in all, Ontario is becoming a hotspot for technological advancement. Through the work of businesses, research centres, and innovative minds, the province is creating groundbreaking technologies that are revolutionizing the auto and manufacturing industries.

The combination of autonomous vehicles, robotics & automation technologies, and improved safety protocols lead to more efficient production, improved quality control, and greater economic benefit. With Ontario's impressive infrastructure and highly skilled workforce, many companies are taking note of this dynamic region as a place to do business – making it no surprise that it is quickly becoming a hub of innovation and creativity.

#### Perspective



# **ONE OF CANADA'S "GREENEST" COMMERCIAL BUILDINGS**

### Endress+Hauser state-of-the-art customer experience and process training centre setting a new example in Burlington Ontario.

Burlington has long been home for Endress+Hauser and when the advanced manufacturer required more space, the company pulled out all the stops to stay in the city.

"Burlington speaks for itself in terms of quality of life. Our people love it here. We knew we would lose valuable people if we moved," says Tony Varga, general manager of Endress+Hauser Canada.

The Swiss-based global instrumentation company moved into its new \$28-million Customer Experience Centre in November 2021. It's just 300 metres from the building it had outgrown.

"Burlington is one of the best places to live in the country and it has a very well run municipal government that is easy to work with. They are accessible, transparent and approachable."

It is attractive to talent, who come from abroad or from the many high-quality postsecondary institutions within a two-hour radius, says Varga.

Endress+Hauser, a family-owned company with net sales of about \$4.2 billion CAD in 2021 and more than 15,000 employees in 70 countries, specializes in process automation and laboratory instrumentation equipment.

Endress+Hauser has been in Burlington since acquiring Davis Controls 30 years ago and now employs 90 in the city. When it outgrew its facility, the company negotiated a severance for a piece of property that wasn't on the market.

"We paid a premium for that land because we wanted to stay in Burlington. What solidified our decision to stay was the support of the mayor, the local councillor and city staff. We felt heard and we had access to those who could help us resolve issues as they came up. There will always be challenges with a project like this, but we got impeccable support from the highest levels in Burlington," says Varga.

"Burlington is a vibrant, friendly city that balances urban living with a small-town feel and rural beauty," says Mayor Marianne Meed Ward.

"Simply put, companies choose Burlington because it's where their employees want to be. We're close to Toronto and the U.S. border, and you'll find 20 post-secondary institutions within a one-hour drive. Our business community is strong, and Endress + Hauser is a perfect example of the type of industry leaders you'll find here. If you are considering relocation or expansion in Ontario, I would like to personally invite you to discover Burlington and everything we have to offer. You won't be disappointed."

Endress+Hauser consulted with employees about what they wanted in the new building and studied other locations around the world. The goal was to create an inspiring, flexible and beautiful place for employees to work.

The 47,000-square-foot facility includes a process training unit (PTU), which includes a full-sized pilot plant, a calibration lab and training spaces that demonstrate the company's products and helps customers choose the right solutions.

The building also features sunlit, open concept collaboration spaces, an expansive outdoor terrace, a fitness centre, a multi-faith prayer room, two cafes, multiple coffee bars, casual seating areas and phone-booth-style privacy rooms. The two-storey atrium includes a large planted tree.

During the design process, the company's board challenged the Canadian team to "really push the envelope on sustainability." That resulted in a building that is pursuing both net-zero carbon and net-zero energy, along with LEED Gold. It is the first such private facility in Canada.

The building includes 800 solar panels on the roof, 50 geothermal wells that drill 200 metres into the ground, sophisticated sensors that adjust air purification, temperature, humidity and lighting, and electrical plugs that shut off when a room is not occupied.

The building has won the Rethinking the Future Award 2022 in the Industrial (Built) category and a 2021 Ontario Builder Award, and has captured the attention of companies around the world, says Varga.

Endress+Hauser has now committed to building to LEED Gold and net zero standards around the world.

"Our board didn't ever ask about return on investment (which comes in 20 years). We did it because it's the right thing to do."

To learn more about Burlington, visit investburlington.ca. You can also contact the Burlington Economic Development team directly at +1 (905) 332-9415



# CLEANTECH COMMONS AT TRENT UNIVERSITY – A COMMUNITY OF CLEANTECH INNOVATION

Our world is at a tipping point, and as we transition to a clean growth economy Cleantech Commons at Trent University in Peterborough, Ontario, is set to lead the charge.

As Canada's premier new green technology research and innovation hub, Cleantech Commons is helping move cutting-edge technologies from the laboratory to the marketplace.

By facilitating academic and entrepreneurial collaborations, this centre of clean technology research and innovation is focused on generating solutions to the climate crisis and other large energy and environmental challenges.

For this reason, Cleantech Commons is fast becoming recognised as a key point of convergence for emerging green ventures, academia, disruptive start-ups, as well as existing businesses focused on water technologies, environmental services, advanced material sciences, medical and health products, agri-food and agri-business, as well as other low-carbon technologies and solutions.

#### Attracting cleantech talent to support regional economic development

Peterborough is a vibrant hub of entrepreneurship, offering a network of professional and business supports. The city is home to rich natural resources, exceptional post-secondary educational institutions, and a well-equipped business and innovation landscape.

Cleantech Commons is leading the growth of the local clean technology scene and, in concert with post-secondary institutions such as Trent University, Fleming College, and Seneca College's School of Aviation, is helping to retain top talent in the region while contributing to sustainable economic growth.

#### Delivering skilled graduates to lead tomorrow's green economy

Cleantech Commons is focused on supporting opportunities that will positively impact the future.

Our research park provides access to some of the brightest minds the region has to offer. It is designed to be a collaborative space where industry works alongside researchers and students to explore practical solutions to some of society's most pressing challenges. And it serves as a collaborative hub where new ideas can be explored, prototypes are designed, and impactful new cleantech products and services are able to be piloted and launched.

Peterborough's post-secondary institutions are key players in the innovation ecosystem, not only supporting various projects and incubator programs that are strengthening the growth of the local cleantech sector, but also providing a pipeline of expertise and job-ready graduates.

Cleantech

at TRENT UNIVERSIT

#### **Championing cleantech entrepreneurs**

Great innovations often stem from small ideas. Yet, the Canadian cleantech innovation sector lacks opportunities for new technology demonstration and piloting for commercial scale-up.

Cleantech Commons fills this gap by providing access to value-added & professional services, specialized facilities, mentorship, incubation programming, experiential learning opportunities, co-working spaces, and commercialization coaching.

Several key partnerships are helping to translate and transition cutting-edge research breakthroughs to the global market – turning ideas into practical applications and commercial outcomes, enhancing economic growth and social impact, tackling pressing societal challenges, and shaping the green economy of the future.

Through a partnership with **Bioenterprise Canada**, for example, Cleantech Commons offers access to targeted business acceleration services in the agri-tech and food sectors, as well as to programs such as FoodShift, which supports the adoption of GHG-reducing clean technologies in Ontario's food and beverage processing sector.

A partnership with **GreenCentre Canada** is designed to support early-stage innovators accelerate the development, testing, piloting, and scaling of innovative chemistry solutions that advance both the economy and the environment. Here, the Advance-ON program provides unique, high-value services to start-ups in the sustainable chemistry and advanced materials sectors.

Cleantech Commons' partnership with **Ontario Genomics** supports the BioCreate Program, which provides opportunities for small- and medium-sized enterprises in the genomics and engineering biology space to commercialize their products and technologies.

The research park is also invested in inspiring the entrepreneurs and innovators of tomorrow. This has led to partnerships with **StrikeUP**, which puts women and Indigenous entrepreneurs at the forefront of Canada's economic recovery; and with **Rain It In**, which helps students create solutions to mitigate the impacts of intense rainfall events and flooding caused by climate change.

Cleantech Commons is fast becoming a hub where innovation flourishes, where creative collaborations begin, and where life-long partnerships are cultivated.

If Cleantech Commons sounds like a place you would like to call home for your cleantech research facility, startup, or growing company, **contact Martin** Yuill at (+1) 705.748.1011 ext. 6036 for a confidential discussion, or visit www.cleantechcommons.ca to learn more.



#### Perspective™



# ONTARIO'S AEROSPACE AND DEFENSE MANUFACTURING OFFERS ACCESS TO ADVANCED CAPABILITIES

Ontario is home to a number of cutting-edge aerospace and defense manufacturing companies. The sector is responsible for producing aircraft, unmanned aerial vehicles (UAVs), spacecraft, missiles, armaments, and protection systems. Ontario's aerospace industry is also at the forefront of research and development into advanced technologies such as hypersonic flight, quantum computing, and autonomous robotics.

The province has several aerospace clusters located throughout the region which offer a range of services to manufacturers including research and development, engineering, testing and evaluation, training, supply chain management, and economic development.

### **Overview of Ontario's Aerospace** and Defense Industry

Ontario is a top global center for aerospace and defense industries, and the province is continually working to expand its foothold in this area.

As Ontario seeks to increase foreign investment, it is providing numerous incentives, such as tax breaks and research grants, that make investing in Ontario's aerospace and defense sector attractive to companies around the world. This helps create jobs in the Province while also allowing Ontario-based businesses to invest in technology needed to remain competitive with other countries. With government support continuing unstinting, Ontario's aerospace and defense industry continues to be an attractive opportunity for partnerships and investments.

### Benefits of Manufacturing in the Province

Ontario is seeing a strong growth in aerospace and defence manufacturing due to competitive labour costs, robust public-private partnerships and top-tier infrastructure – making it an attractive destination for foreign investment.

Ontario takes a strategic approach to aerospace and defence, continuously striving to expand opportunities while fostering collaboration between industry and educational institutions to ensure Ontario's manufacturers have the skilled workers they need. This combined with the comprehensive investment attraction strategy means Ontario is well-positioned to attract further investment in aerospace and defence manufacturing, leading to more jobs and economic benefits for Ontario.

### **Classes of Aerospace and Defense Products Manufactured in Ontario**

Aerospace and defense manufacturing plays a vital role in the economy of Ontario and across Canada. Manufacturing of both aircraft and aerospace systems, as well as military ground vehicles and munitions, adds value to the province and creates jobs for Canadians.

Aircraft parts, such as engines, avionics, landing gears, navigational instruments, radars and aerial transmitters are some of the many types of products manufactured in Ontario. In addition to producing complete aircraft systems, factories across the province also make parts for electrical systems including circuits boards and dozens of other components that go inside other items such as military vehicles.

Highly trained professionals are required to build these components and inspect them for quality assurance before they are ready to be used by operators in the air or on land. Investing in aerospace and defense manufacturing is beneficial for Ontario's economy in numerous ways – creating employment opportunities while offering high-quality products essential for aviation safety with advanced technological capabilities at competitive prices; this is all while contributing significantly to Canada's Gross Domestic Product.

# AEROSPACE & DEFENCE

# ONTARIO STATISTICS

Ontario is a location that attracts global aerospace & defence corporations to expand their operations, while also fostering the growth of local businesses that offer high-quality innovation and pioneering services. The province's manufacturers play a crucial role in the worldwide supply chain.



https://www.investontario.ca/aerospace#intro

# **Companies Currently Doing Business in Ontario's Aerospace and Defense Sector**

Ontario is home to a wide range of world-leading companies in the aerospace and defense sector, producing everything from advanced aerospace components to high-tech military equipment.

With a mix of Canadian-based firms such as Avro Canada and Deltion Precision Products, as well as regional subsidiaries of global giants like Lockheed Martin and Boeing, this important industry in Ontario produces an impressive array of products for domestic and international customers - from airplanes, helicopters, and unmanned aerial vehicles, to advanced weapons systems and communications networks.

With the province's long history of innovation in aerospace and defense manufacturing, it is no surprise that the sector has grown so rapidly in recent years.

# Supporting Programs and Initiatives for the Industry

Supporting programs and initiatives are essential to the health of the industry in Ontario. Types of aerospace and defense products manufactured here range from unmanned aerial systems, airframes and turbine engines to space electronics and mission-critical satellites.

It is essential that these industries receive adequate funding, policy support and research facilities in order to continue to make significant contributions towards national economic growth. Investment in public programs and boosting public-private partnerships will open up more opportunities for industry development, research, innovation, skills upgrading and training. In addition to that, providing access to capital through business financing is another area where government intervention can be invaluable. With strong support systems in place, Ontario's aerospace and defense industry will be wellequipped to continue producing products of exceptional quality for both military and commercial markets throughout Canada.

# **Opportunities for Investment and Expansion**

With the abundance of Ontario-based Aerospace and Defense product manufacturers, there are boundless opportunities for potential investors to explore. Types of products made in the area range from aerospace platforms and components, highly specialized defence products, missiles and launchers, space systems technology, engines and propulsion systems, and robotics to name a few.

These businesses have proven successful over time as well as a profitable place for global companies to invest or expand. The prospects for success in this area is why it's become so attractive for entrepreneurs in the space industry. With the growth of this sector expected to continue during the coming years, now is a great time for investors to take advantage of these Ontario-based opportunities.

The aerospace industry in the province is both vibrant and growing. With various clusters located throughout the region, a breadth of services are available to manufacturers, providing them with comprehensive support. From research and development to engineering, evaluation, training and supply chain management, initiatives undertaken by the aerospace clusters serve to provide businesses the expertise and know-how needed for success.

Furthermore, their economic development activities provide beneficial opportunities for growth. As more companies relocate to the province or expand their existing operations here, exciting developments await in the provincial aerospace sector.

# **ABDUL RAZAK JENDI**

In today's world materials science and engineering determines the difference between a breakthrough in commercializing technology and a theoretical hypothesis.

The city of Kingston in Eastern Ontario recognized the importance of developing a healthy ecosystem early on and supported several cuttingedge advancements on the materials science and engineering front. In 1940 Kingston was selected by the Aluminum Company of Canada (ALCAN) to build its plant to conduct research and development of aluminum alloys, and manufacture sheet metal, cans, and supplies for major industries such as automotive, transportation, beverage, and packaging. In 2004 Novelis, took over the site in Kingston, and today it manufactures aluminum products for Ford, BMW, Mercedes, General Motors, and Thyssen Krupp employing about 275 people. Kingston hosted Canada's first and the world's second Nylon 6,6 polymer plant manufacturing parachute fibers. Owned by INVISTA the site continues to manufacture products for use in airbags, carpets, automotive and electrical parts.

Materials scientists in Kingston work with diverse types of materials such as metals, polymers, ceramics, liquid crystals, composites to advance technologies in clean energy, construction, recycling, biotechnology, and nanotechnology. Employing modern processing and discovery principles such as casting, additive manufacturing, coating, evaporation, plasma and radiation processing, artificial intelligence, and computer simulations the expertise in Kingston addresses global challenges and supports the growth of innovative companies.

DuPont's Kingston Technology Centre (KTC) has expertise in plastics and operates as part of a global network of R&D centers within DuPont. The facility is home to over 100 scientists, engineers, technologists, technicians, and administrative and support staff. KTC plays a specialized role in the development and scale-up of new chemical and polymer processes from laboratory proof-of-concept to semi-works piloting development, and commercialization. Its advanced facilities and equipment enable customers to reduce their cycle times and piloting costs. Small-scale production of highvalue materials considered strategic by businesses also takes place at KTC. "The DuPont Kingston Technology Centre is committed to sustained site improvements through enhanced core values, employee engagement & reinvestment in our people, facilities & communities," says Dr. George Jacob, DuPont Kingston Technology Centre Site Leader.

Another key component in Kingston's materials science thriving ecosystem is Kingston Process Metallurgy (KPM). For over 20 years, KPM has provided large and small companies with clarity around chemical processes. Questions like "How does this scale?", "What are the costs?", and "Are there problems on the horizon?" are tackled early so that companies can pick the right path for their project's development. Led by Dr. Boyd Davis and Dr. Alain Roy, Principals, KPM has developed a framework that supports startups that involves combining knowledge of chemistry, unit operations, economics, and test work to ensure that the process scale properly. Boyd believes that "KPM provides a critical piece in the scale-up for companies that need

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KINGSTON

Ontario, Canada -

#### Abdul Razak Jendi

Investment Manager, Sustainable Manufacturing Kingston Economic Development jendi@investkingston.ca



support for their chemical processes. Early-stage clarity is something that can be of huge value." Early-stage start-ups can go through KPM's accelerator, KPM-Accelerate, while larger companies are helped by KPM's integrated support such as analytical, machine shop, and pilot plant.

Moreover, cleantech in Kingston has a fair share of focus with GreenCentre Canada's mission to support the growth of companies by transforming their innovations into valued products, processes, and services. GreenCentre's established role in the Canadian cleantech ecosystem is to provide technical project services – validating and developing their clients' process and material innovations so they are best positioned to raise the financing they need to scale and grow their sustainable businesses in Canada. According to Dr. Tim Clark, Business Operations Manager "GreenCentre Canada deploys its team of experienced chemists to carry out critical technology development projects in our well-equipped lab facilities for innovative cleantech companies." Tim adds that "GreenCentre supports a wide range of companies commercializing break-throughs in chemistry and material science that will impact sectors of strategic importance to Canada including resource recovery, batteries, value-from-waste, and clean energy."

Furthermore, the NanoFabrication Kingston lab is an open-access facility providing science and engineering researchers from academia, government,

and industry with access to leading-edge equipment, methodologies, and expertise for designing and prototyping microsystems and nanotechnologies. Additionally, The Nuclear Materials group at Queen's University carries out world-leading research in the area of structural materials for nuclear power applications. Led by Professor Mark Daymond the Reactor Materials Testing Laboratory (RMTL) uses a proton accelerator to introduce damage into materials at a microscopic scale. By studying the effects of this damage on the way that materials behave researchers gain insight into, and draw parallels with, the way that materials are damaged within a nuclear reactor.

Kingston is home to three globally renowned educational institutes. Queen's University, St. Lawrence College, and the Royal Military College of Canada have all contributed to develop and futureproof Kingston's and Canada's talent pool, making the region an attractive spot for research partnerships and investments. According to Statistics Canada Kingston has the smartest workforce in Canada, with the highest number of Ph.D. graduates per capita.

Kingston remains committed to supporting technological breakthroughs and commercializing advanced processes and materials for a better future. Kingston Economic Development Corporation calls upon innovative companies to reach out and explore what the city offers.

Kingston Economic Development Corporation www.investkingston.ca

Perspective"



# **INVESTING IN ONTARIO: LEVERAGE THE BENEFITS OF A LEADING GLOBAL MANUFACTURING HUB**

Ontario, Canada is a hub for some of the biggest chemical companies in the world. Five out of the top ten chemical companies have major manufacturing operations in Ontario.

Ontario's strategic location and well-developed infrastructure are two of the main reasons why these multinational corporations have chosen to invest into their Canadian operations here. In addition, the province is home to numerous educational institutions and research centers which provide access to a highly skilled workforce.

### Well-developed Infrastructure and Supply Chain System

Ontario's well-developed infrastructure and supply chain system has been instrumental in attracting foreign investment within the chemical industry sector. Existing companies have been able to use this system to reduce costs by optimizing production processes, developing innovative new products such as bio-hybrid chemicals, and providing businesses with essential resources and services.

Additionally, foreign investors have noted that Ontario's sound infrastructure has enabled a smoother introduction of their business operations into the region while expanding their markets. This attractive environment has made Ontario an ideal destination for companies keen on participating in the global economy and a leader in sustainable business practices.

# **Strong Diverse Biomass Supply**

Ontario's substantial agricultural and forestry sector provides a wide range of feedstocks that can be utilized to produce biobased chemicals, fuels, and materials.

In 2020, foreign investment in the Ontario chemical industry sector was estimated at \$25 billion. This investment has served as a catalyst for bio-hybrid chemicals production, made possible by the abundance of biomass material harvested from wood, winter wheat, grain corn, and soybeans grown in this region. 94% of Canada's supply of corn and soybeans come from Southern Ontario alone.

Furthermore, Ontario yields an impressive 14 million cubic metres of harvested wood every year, making its resources ideal for the development of various green fuel sources such as ethanol, butanol and biodiesel.

# **Research in Biotechnology**

Ontario is one of the most attractive regions for foreign investors and businesses looking to capitalize on industrial biotechnology. With leading academic and commercial institutes, Ontario has become renowned around the globe in this field.

Our specialized centres offer the resources necessary to ensure commercial success while investing in technologies such as bio-hybrid chemicals developed from biologically oriented routes. Furthermore, Ontario provides unparalleled access to R&D matchmaking, advisory services and plug-and-play spaces to assist in business acceleration within the chemical industry sector.

This makes Ontario indisputably a global centre for industrial biotechnology research and development.

# **Educational Research**

Ontario universities are leading the charge in industrial biotechnology research, drawing substantial foreign investment to Ontario and providing tremendous benefit to the local chemical industry sector.

Groundbreaking projects are underway at Ontario universities, with researchers exploring new methods in producing bio-hybrid chemicals that have a substantially reduced environmental impact. The impact of these Ontario universities' initiatives will be felt far beyond provincial borders as further scientific breakthroughs are made and foreign firms look more closely at Ontario's research capabilities.

# Sarnia-Lambton – Ontario's Chemical Cluster

Ontario's Sarnia-Lambton region has become the hub for chemical and biochemical production plants, as well as petroleum refiners, making it Canada's most concentrated and integrated chemicals cluster.

Boasting an abundance of energy resources, competitive energy prices and access to complementary services, the region has seen considerable foreign investment that is driving economic growth in Ontario. Having attracted 50+ companies over the past several decades, the region is a major contributor to Ontario's chemical industry sector. Furthermore, with Ontario backing innovations including bio-hybrid chemicals, this cluster is positioned to become an even greater global force in chemical production in the years ahead.

# **Ontario has an Abundance of Talent**

Ontario is home to a significant portion of Canada's skilled trades workers and plays an important role in the nation's economy. It is estimated that more than 26,000 people are employed in Ontario's chemical industry sector alone.

As foreign investment in Ontario increases and bio-hybrid chemicals become part of everyday production processes, economic growth continues to pick up speed in the province across multiple sectors. Ontario is poised to be a major driving force within Canada's economy for years to come.

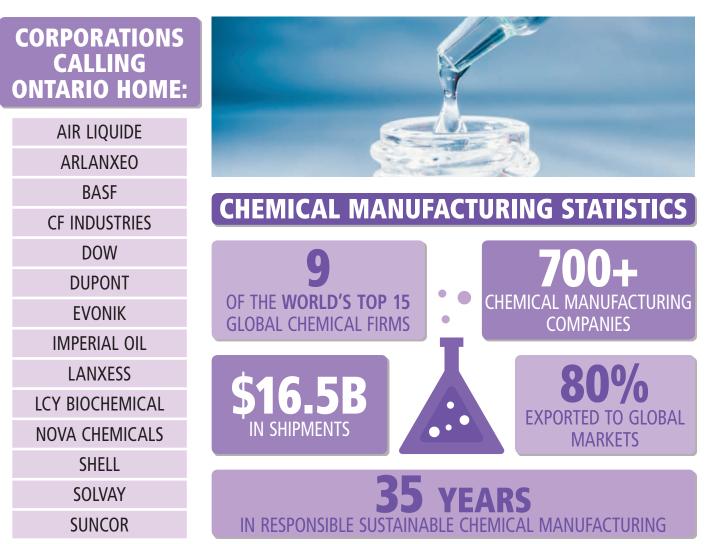
# **Ontario Chemical Subsectors**

Within Ontario's chemical manufacturing industry lies a number of specialized sub-sectors

- Basic chemicals ethylene, aromatics, styrene)
- Polymers, Resins, Synthetic Rubber, Additives
- Fertilizer
- Industrial gases Linde
- · Specialty chemicals coatings, adhesives, paper chemicals, water
- Biobased chemicals and materials
- Petroleum refiners

Ontario is a prime destination for chemical manufacturing and R&D operations due to its location, infrastructure, and educational hub. The province is not only able to attract established global firms, but also those starting up small-scale operations. With the promise of world-class talent and the latest research capabilities, this Canadian hotspot is well-positioned to capitalize on new industry trends.

Companies interested in entering the Canadian market need only look towards Ontario as a prime opportunity for investment. It's clear that investing in this province can offer lucrative results for companies across all sectors of business—and chemical production is no exception. With its many advantages, it's easy to see why Canada's most populated province has become an NDPEC for international giants alike.



Source: www.investontario.ca/chemical-and-biochemical

# Canada's nuclear university

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**Cancer treatment.** Every year, more than 70,000 cancer patients around the world are treated with materials made at our nuclear facilities.

**Clean energy production.** Our nuclear expertise will help Canada achieve its Net Zero goals and pave the pathway for community-based Small Modular Reactors.

**Economic growth.** Our strength in nuclear research drove the creation of new Canadian start-up companies.

**Air safety.** The global aerospace industry relies on us to verify the safety of aircraft engine components.

**Smarter materials.** A new national lab at our reactor will allow Canadian scientists to test materials of the future.

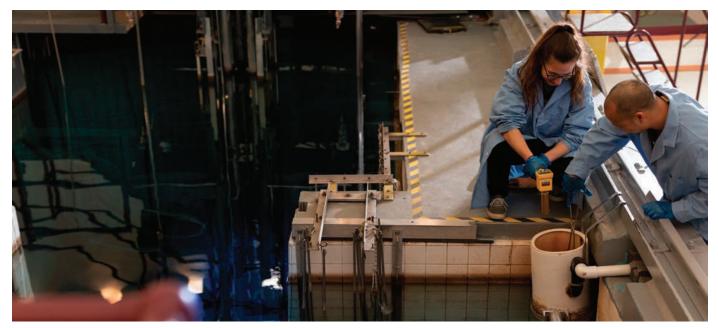
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> **David Novog** Nuclear energy and safety expert UNENE Industrial Research Chair









McMaster University – home to Canada's most powerful nuclear research reactor – is advancing clean energy solutions through small modular reactor (SMR) research and education.

# ADVANCING CLEAN ENERGY SOLUTIONS AT CANADA'S NUCLEAR UNIVERSITY

McMaster University is pioneering clean energy solutions that will help Canada achieve its net zero target. As a leader in nuclear research and education, McMaster has a long history of innovation in the nuclear space and has been a key support to Canada's nuclear energy sector for decades. Now, the University's experts are driving research on a new class of nuclear reactor with the potential to change the future of clean energy production in Canada and around the world.

Small modular reactors (SMRs) function like larger reactors but are a fraction of the size. Smaller in power capacity than traditional nuclear power reactors, their components are pre-manufactured and then installed on-site. SMRs are ideal for installation in remote communities and are more cost- and time-effective than custom-building a nuclear reactor for a particular location.

SMRs are a key technology of interest for Canada as the country looks toward a low-carbon future. In 2020, the Canadian government released its SMR Action Plan, which recognized the potential economic, geopolitical, social and environmental benefits of SMRs. As part of the Plan, McMaster will work to advance SMR research, education and training at the University and explore the potential of hosting an SMR on campus.

Dave Tucker, McMaster's assistant vice-president, research (nuclear) says the University's vision is to show Canada and the world the tremendous impact this technology can have for communities in need of clean power.

"McMaster has over 60 years of experience operating a 5 MW nuclear research reactor on campus, and it's this expertise that makes us well-equipped to host the next generation of nuclear reactor. An SMR at McMaster would provide an opportunity for local and global communities and industries to learn more about the technology and help them make decisions about their own energy future," he says.

McMaster is currently conducting a feasibility study in partnership with Ultra Safe Nuclear Corporation and Global First Power. If deemed technically feasible, the University will engage in broad consultation with community, business, and government stakeholders and Indigenous communities as part of the decision-making and licencing process.

Home to the McMaster Nuclear Reactor and a suite of world-class nuclear facilities, the University's nuclear energy experts are spearheading research and education programs in SMR technology validation, nuclear safety, waste reduction, nuclear security and site monitoring, and integrated urban energy systems.

Dave Novog, professor of engineering physics at McMaster and director of the Institute for Energy Studies says SMRs can be used for multiple purposes, making them a game-changer in clean energy production.

"Canada's grids are fairly green already, depending on where you live. Ontario, B.C. and Quebec, for example, are abundant in hydro and other forms of lowcarbon electricity. But we need to cut fossil fuels in many other areas immediately—especially in high-emissions industries like transportation, agriculture and heating, which account for two-thirds of Canada's carbon footprint," says Novog, emphasizing that there is no path to net zero without nuclear power.

"SMRs could fill existing hydro gaps in, say, remote northern communities. Whether or not an SMR is deployed depends on what communities want to do with them: one SMR could heat a group of greenhouses to grow food; a larger one could power a fleet of buses, purify water or sell excess steam and hydrogen for industrial use and extra income," says Novog, who also leads McMaster's Small Modular Advanced Reactor Training Program, designed to train the next generation of leaders in SMR research, safety and deployment.

Tucker says the SMR feasibility study is an important first step in realizing our vision for a new chapter of nuclear research and innovation at McMaster and across the country.

"As Canada's Nuclear University, McMaster has an important role to play in developing meaningful energy solutions that will help the country meet its net zero goals and improve clean energy access for Canadian communities."

#### Perspective



# PIONEERING A GREENER FUTURE: ONTARIO'S COMMITMENT TO ADVANCE CLEANTECH

Ontario is leading the way in Canadian cleantech growth, with its innovative approach to sustainable energy solutions. Home to over 445 cleantech companies, Ontario is Canada's largest source for clean-tech technology and services. In 2019 alone, these companies generated over \$2 billion in revenue and employed more than 10,000 people across the province.

Ontario's commitment to developing cleantech solutions is further demonstrated by its development of the largest green energy project in North America and its investment in new clean-tech research and development initiatives. The provincial government has also committed to investing \$400 million over the next four years in green energy projects as part of Ontario's Climate Change Action Plan.

For a considerable amount of time, Ontario has maintained a prominent position in the cleantech and sustainable energy industry, through substantial investments in innovation and the progression of crucial research initiatives in this domain. Ontario is home to some of the brightest minds pioneering advances in solar, hydrogen, biofuels, electric vehicles and smart energy technologies.

Ontario's commitment to investing in these areas is especially notable when it comes to water technology—an area where Ontario leads the way with cuttingedge research and development initiatives being conducted at leading universities across the province. As Ontario continues to innovate and push the boundaries of sustainable energy and cleantech, its experts are paving a way for greener futures around the world.

### Ontario's Cleantech Sector and its Contribution to the Province's Economy

Ontario's cleantech sector is steadily making great strides in fostering economic growth within the province. This rapidly expanding industry is noteworthy for

its enthusiasm and drive to build a low-carbon economy through sustainable energy innovation.

Due to its steadfast dedication to cleantech and multiple initiatives aimed at fostering advancements in this industry, Ontario has emerged as an appealing location for foreign investment. The province's leadership in granting government incentives to support cleantech businesses has created a strong foundation for successful enterprise, helping Ontario maintain its growing reputation as one of the leading jurisdictions for cleantech research and development.

### Ontario is an Ideal Region for Cleantech Investments

Ontario is an ideal region for Cleantech investments as it offers a strong economic foundation, along with significant commitment and incentives for foreign investors.

The province of Ontario's innovative policies and strategies, streamlined regulatory framework, adoption of new sources of sustainable energy such as hydroelectricity and renewables, and the proficient workforce collectively reflect its progressive approach towards sustainable development.

Additionally, the Ontario government provides Cleantech companies with investment opportunities, financing programs, tax credits & incentives for research & development, in addition to export and trade support which can contribute to profitable advantages within Ontario and beyond.

All of these factors make Ontario an ideal region for foreign investors looking to launch or expand their Cleantech investments in North America.



### How the sector is Helping the Region Move Towards a Sustainable Future

Ontario has long been at the forefront of cleantech innovation and is now leading the way in providing sustainable energy solutions. The province's cleantech sector is actively engaged in helping Ontario move towards a more sustainable future, in terms of both economic prosperity and environmental sustainability.

The cleantech sector in Ontario is creating new jobs, launching creative products and services, and driving greater efficiency throughout Ontario's economy while shifting it away from unsustainable practices. Whether developing green energy systems or pioneering new predictive analytics technology, Ontario's cleantech sector is consistently demonstrating its leadership in transitioning the region towards a healthier, more environmentally conscious future.

### Innovative Cleantech Solutions Implemented in Ontario

Ontario has been at the forefront of innovation in the development of sustainable energy solutions. Through the utilization of cleantech solutions, Ontario is helping to lead the world's transition to a carbon-free future.

From increased investment in renewable energy sources such as wind and solar, to initiatives like Ontario's Feed-in Tariff Program encouraging individuals and businesses to contribute to Ontario's clean energy supply, Ontario is committed to being a leader in cleantech innovation. Ontario continues to demonstrate its dedication to developing innovative cleantech solutions that will help shape a healthier and more sustainable environment for our province and beyond.

### Cleantech Incentives: Ontario is Open for Business

Ontario's cleantech sector is filled with opportunities to innovate and create sustainable energy solutions for the future. In order to attract more investors to this sector, Ontario should offer generous incentives such as tax breaks and venture capital funding.

This will open up new avenues for innovation and create an environment that encourages entrepreneurs to pursue their goals in the cleantech space. Investors will also be further encouraged by Ontario's strong commitment to promoting clean technology-based businesses throughout the province.

With these incentives in place, Ontario can become a leader in clean technology and attract investors who seek substantial returns on their investments while helping the world become a cleaner and more sustainable place.

Ontario is setting the global standard for cleantech and sustainable energy solutions. As more people become aware of the environmental challenges facing our planet today, it's more important than ever to invest in research projects that will bring us closer to a greener economy.

That's why Ontario has committed so heavily to innovation in these areas—to ensure a sound future for generations ahead. As we continue marching forward into a new era of clean energy and smart technologies, the province is leading the way with its infrastructural investments, exquisite talent pool and unwavering commitment to sustainability.

#### Perspective™



# HAMILTON IS SHAPING THE SCIENCE – AND THE FUTURE – OF STEEL

Hamilton is shaping the science – and the future – of steel by designing, developing and manufacturing steel for critical sectors of the economy, including energy, automotive, defense, aerospace, health and construction.

From advanced steel production critical to next-generation vehicles, clean energy and green buildings, to the engineering, testing and commercialization of new steel products, Hamilton is leading the way.

The city has a long-standing history and expertise in steel and metal manufacturing.

Hamilton is home to major innovative manufacturers such as ArcelorMittal Dofasco, Stelco, Max Aicher North America (MANA) and CFF Stainless Steels.

It's also the headquarters of NGen, the industry-led, non-profit organization leading Canada's Global Innovation Cluster for Advanced Manufacturing. It is one of five national networks supported by Canada's ambitious Global Innovation Clusters Initiative and brings the worlds of manufacturing and technology together to drive digital transformation at a national scale.

NGen is the centre of a network of over 2,800 manufacturers, technology companies, innovation centres, and researchers in Hamilton that are developing, applying, and scaling-up transformative manufacturing solutions.

Hamilton provides all the fundamentals needed by advanced manufacturers, including strong transportation infrastructure, access to lands for development, a gateway location into North America's largest market, and a richly skilled labour force fed by McMaster University, Mohawk College and many other regional post-secondary institutions.

It is the only city in the region to have all modes of transportation – air, sea, road, and rail – within the municipal boundary. That includes an international airport that is Canada's busiest overnight cargo hub and the largest port in Ontario. Both also feature 24/7 international border services.

Hamilton is a designated Foreign Trade Zone (FTZ) that acts as a hub for international trade and allows for tariff and tax emptions, duty relief programs, and exclusive concierge investment services.

The city's nine business parks offer a range of development opportunities at a much lower cost than the GTA and employers have access to a resident labour force of 400,000 and more than 2 million people within an hour drive.

### **R&D** in metals and materials

Hamilton features a rich ecosystem of innovation hubs, incubators, accelerators and research centres serving the advanced manufacturing cluster.

They include: McMaster Innovation Park (MIP), which was awarded \$10 million CAD to support an integrated automotive, aerospace and advanced manufacturing network; Innovation Factory; and IDEAWORKS and a range of research hubs at Mohawk College.

CanmetMATERIALS, headquartered in Hamilton, is a Natural Resources Canada federal laboratory and is one of the largest research centres in Canada dedicated to fabricating, processing and evaluating metals and materials. Scientific and technical staff research and develop materials solutions for Canadian industry, using physical simulation equipment to mimic production processes and solve real-world problems.

Facilities and equipment include a metal-casting lab for melting and casting alloys, a pilot-scale hot/cold rolling mill, metal-forming and welding labs, mechanical, thermo-mechanical and corrosion testing, and electron microscopes.

"We do testing of new processes or new products or work to improve existing ones. And we can do that testing efficiently and quickly," says research scientist Dr. Colin Scott.

Located at MIP, CanmetMATERIALS headquarters relocated to Hamilton from Ottawa in 2010 to be close to the heart of Canada's steelmaking and automotive manufacturing industries.

"The industrial base and the R&D power in this region make it a bright spot in Canada for advanced manufacturing."

CanmetMATERIALS works alongside materials researchers at McMaster University (particularly in the McMaster Automotive Resource Centre and the McMaster Steel Research Centre) and Mohawk College (particularly the Additive Manufacturing Innovation Centre) and with companies of all sizes, including Hamilton steelmakers ArcelorMittal Dofasco and Stelco.

A growing area of focus for the roughly 100 staff at CanmetMATERIALS is the steel industry's decarbonization efforts, says Scott.

#### ⊃erspective™



### **Green steel**

On that front, Hamilton is also leading the way.

Backed by strong commitments from government, industry, and research centres to support the transition to decarbonization, the city has an opportunity to get ahead of the curve and become a global leader in low carbon steel and metal manufacturing.

The foremost example is ArcelorMittal Dofasco, which has undertaken a nearly \$2-billion transformation to be the first integrated steel mill in North America, and among the first in the world, to eliminate coal-based ironmaking from its operations.

Coke-making operations and coke-fed blast furnaces will be replaced by the production of electric arc furnaces (EAFs) – including a new state-of-the-art build and an existing facility – that are fed with direct reduced iron (DRI) produced



on-site. It will reduce carbon emissions by approximately 3 million tonnes or about 60 per cent by 2028.

The project is supported by \$400 million from the federal government and \$500 million from the province.

Worldwide, ArcelorMittal has committed to reduce the carbon intensity of the steel it produces by 25 per cent by 2030 and to be net zero by 2050.

"This investment is built on a legacy of performance and is a beacon to our future," said CEO Ron Bedard at the project's ground-breaking in October 2022. "We have had Dofasco families with five generations of people working here. And I'm so proud, and so humbled, that with this project future generations will have the opportunity to continue to build the company and maintain our incredible position as a leader in Canadian manufacturing. This is indeed a generational project."

Hamilton has always been an advanced manufacturing powerhouse and it has everything it needs to continue to grow and deepen its national and global impact.



# **MANUFACTURING THE FUTURE, ONE INNOVATION AT A TIME**

The City of Vaughan is at the intersection of innovation and a well-established manufacturing sector, with an ever-expanding cluster of advanced manufacturing firms employing cutting-edge technologies and processes to accelerate growth across key regional sectors, including automotive and food processing.

Advanced manufacturing in Vaughan is a diverse business environment, including plastic, rubber, paper, textile, metal, transportation, and electronics manufacturing, accounting for 19 per cent of Vaughan's real GDP and contributing nearly \$4.7 billion in economic output (in 2021) while employing 42,000 workers.

Leading advanced manufacturing companies in the cluster include Magna Tool and Die, BVGlazing Systems, Mobile Climate Control Industries Inc., Toro Aluminum, Maple Stamping, Alfield Industries/Martinrea, CO-EX-Tec, and Anton Manufacturing.

As manufacturing changes and evolves and demand for cutting-edge products like electric cars grows, Vaughan is well prepared to welcome new manufacturers and growth in its local employer base. Through its part of Canada's Advanced Manufacturing Supercluster (NGEN), the city is building next-generation manufacturing capabilities and incorporating technologies such as advanced robotics and 3D printing into existing operations. And as these companies scale up, they're finding themselves well supported by local access to end-to-end advanced manufacturing supply chain solutions and a labour force of nearly four million people across the Greater Toronto Area (GTA).

"Vaughan's access to superior end-to-end supply chain solutions, transportation assets, and industrial market size make our city a competitive and attractive destination for advanced manufacturing," said Vaughan Mayor, Steven Del Duca. "To support further growth, our team continues to promote Vaughan as a destination for advanced manufacturing, foster growth throughout the sector and support existing businesses through tailored services."

Vaughan provides one of the largest industrial markets in the country, with a total industrial inventory of nearly 100 million square feet. Proximity to major regional transportation hubs such as Toronto Pearson International Airport and major border crossings via Highways 401 and 407 strategically position the cluster well for further expansion.

More information on Vaughan's manufacturing sector is available at vaughanbusiness.ca



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# MAKE IT HAPPEN IN ONTARIO: GAIN ENTRY TO CANADA'S PREMIER TRANSPORTATION NETWORKS

When it comes to running a successful business, there are many factors that you need to consider. But one factor that often goes overlooked is the logistics infrastructure of your region.

Having access to efficient and reliable delivery systems can make or break an advanced manufacturing operation, and no other place in Canada has better infrastructure than Ontario.

From its extensive highway networks, deep-water ports, railways and airports – Ontario is ready to support businesses' every logistical needs. We look at why businesses choose Ontario for its highly effective logistics infrastructure for their advanced manufacturing operations.

# Ontario's Role in the Advanced Manufacturing Industry

Ontario is playing a vital role in advancing the manufacturing industry, particularly through its commitment to foreign investment and infrastructure upgrades. Ontario's improved logistics capabilities have enabled businesses in the province to maximize their output while reducing overall costs associated with production.

The government has also partnered with local universities alongside major corporations to help promote Ontario as a premier destination for advanced manufacturing investments. As Ontario continues to make these investments in its manufacturing capabilities, the sector will likely become an even more important contributor of economic growth in Ontario and across Canada.

# **Overview of Ontario's Logistics Infrastructure to Support Advanced Manufacturing**

Ontario is continuing to attract world-wide attention and foreign investment due to its strong infrastructure in support of advanced manufacturing. Ontario's transportation routes, such as highways and railways, provide an ideal logistics framework to move products from the point of origin to destination quickly and securely.

Ontario has a variety of efficient ways for multiple types of vehicles to transport cargo within the province and abroad, along with storage facilities for inventory so businesses can keep up with changing production demands. Ontario's efficient logistics resources provide companies investing in advanced manufacturing processes with access to quality manufacturing facilities equipped with the necessary tools for success.

# How the Transportation Systems and Supply Chain Support Advanced Manufacturing in Ontario

Ontario's advanced manufacturing sector has been greatly supported by its transportation systems and supply chain. With its robust infrastructure, Ontario is an ideal place for foreign investment and an impressive range of logistics services.

By connecting the Province with the global marketplace, these systems provide essential support to Ontario's manufacturers through the transfer of [Story Continues on Page 25]

#### Perspective



# NORTH AMERICA'S ADVANCED MANUFACTURING POWERHOUSE: WINDSOR-ESSEX, ONTARIO

Known as North America's advanced manufacturing powerhouse, Windsor-Essex, Ont. is a global leader and innovator in automation across many sectors.

The history of expertise and advanced manufacturing innovation within Windsor-Essex's automotive sector is well established, but the region is also home to thriving automation in aerospace, food processing and greenhouse technology, pharmaceutical and medical devices sectors.

Parts suppliers, automation companies and mold makers across the region are at the forefront of using innovative technology to remain competitive in a changing global marketplace.

There are more than 1,000 highly specialized manufacturers in Windsor-Essex including two original equipment manufacturers (OEMs), more than 90 parts suppliers, 250-plus machine, tool, die and mold makers and more than 450 automation-related firms. Superior technology, developed through advanced and experimental research, has led to the emergence of this highly specialized network of suppliers to meet the demands of leading manufacturers locally and worldwide.

Underpinning this advanced manufacturing cluster is a highly skilled workforce of 40,000 engineers, production workers, technicians and designers. Local post-secondary institutions offer cutting-edge, custom manufacturing-based programs that fuel the needs of industry.

In addition to top-notch talent, expertise and a deep-rooted history in advanced manufacturing, Windsor-Essex's strategic location provides unparalleled market access to dozens of major metropolitan areas, with millions of consumers. It's a true gateway to North America. Home to the nation's busiest commercial border crossing, Windsor-Essex handles one-third of all trade between Canada and the U.S., reaching over \$300 billion in goods that cross the Detroit-Windsor border annually.

All of these factors contribute to the region's reputation as a globally renowned leader and innovator in advanced manufacturing that is attracting billions of dollars in investments from around the world. Windsor-Essex, Ont. is home to Canada's first full-scale battery production plant that will serve as an anchor for the electric vehicle (EV) sector.

NextStar Energy Inc. is a joint venture of automaker Stellantis N.V. and LG Energy Solution. The partners are making a \$5-billion CAD investment in a 4.5-million-square-foot facility that is expected to produce the lithium-ion batteries for a significant portion of Stellantis' North American market.

The facility is estimated to employ as many as 2,500 and produce 46 gigawatts of battery power annually, which is roughly enough for 400,000 vehicles. That will make it the single biggest factory in energy capability in North America.

Fast on the heels of the NextStar announcement came the deal to see South Korean manufacturer Dongshin Motech (operating in Canada as DS C&K Inc.) build a \$60 million CAD EV supply plant in Windsor, its first in North America. The plant will manufacture highly specialized aluminum casings for EV batteries and will employ approximately 300 people. Together, these two facilities will employ approximately 3,000 people in the region.

Another major investment will see Stellantis return its Windsor operation to three-shift production. The company is spending \$3.6 billion CAD to convert its two Ontario plants to flexible vehicle assembly facilities ready to produce electric vehicles.

That comes with a \$200-million investment – called a game-changer by industry experts – in the modernization and expansion of its Automotive Research and Development Centre in Windsor that will establish it as a major R&D hub for the company across all stages of production – from design to development. The expansion means the addition of more than 650 highly skilled engineering jobs.

Windsor-Essex, Ont. is a place for growth and opportunity. As North America's advanced manufacturing powerhouse and leader in next-generation automation and robotic technology, Windsor-Essex is a prime location for investment and expansion across all sectors. Visit investwindsoressex.com for more information.

#### [Story Continued from Page 23]

materials, supplies, and finished goods. This ensures Ontario businesses are able to both gain new product opportunities and capitalize on existing ones through reliable and timely delivery. In addition to its municipal infrastructure, Ontario features ports that promote international trade within a broad network of railroads, roads, waterways, airports, and other services dedicated to transport effectiveness.

Ontario's extensive transportation coverage offers unmatched access to moving both people and products anytime and anywhere necessary.

### Benefits of Having a Well-developed Logistics Infrastructure for Advanced Manufacturing

Ontario is an ideal destination for advanced manufacturing, and having a well-developed logistics infrastructure in place could open the province up to even more foreign investment.

Logistics infrastructure refers to ports, roads, railways, telecommunications systems and other forms of transportation. In Ontario, it's essential that our high-tech manufacturing companies have access to modern transport networks so they're able to get their products and materials where they need to be quickly and efficiently.

Upgrading Ontario's logistics infrastructure will open the door to increased foreign investment, which is key in helping Ontario's manufacturing sector stay on top of trends in the ever-changing global market.

### A Robust Logistical System Presents Opportunities for Global Companies

Ontario's booming advanced manufacturing sector is well-positioned to take advantage of the system's advantages. Companies in Ontario have been able to benefit from foreign investment and modern logistics infrastructure, allowing them to produce and ship products quicker than ever before.

This quick production cycle has allowed Ontario-based companies to take on projects of unprecedented size and scope, gaining a competitive edge over traditional manufacturing techniques. With the right support, Ontario manufacturers can use this system to drive economic growth in the region for years to come.

Ontario is quickly becoming a manufacturing and logistics hotspot in Canada. With its expansive highway systems, railways, airports, and ports - Ontario is the ideal place for businesses looking to expand their advanced manufacturing operations.

The quality of its logistics infrastructure enables businesses to move products efficiently and reliably to meet customer demands. In addition, the region boasts a highly educated workforce, lower costs of operation, government grants and an outstanding quality of life for business owners. For these reasons and more, it's no surprise why businesses are flocking to Ontario for their advanced manufacturing needs.

Capturing the potential of logistics infrastructure can help businesses unlock new opportunities for growth and development – making Ontario the perfect home for growth-oriented organizations.



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# THE SKIES BELONG TO MISSISSAUGA: Canada's Aerospace Innovation Hub

The biggest aerospace industry cluster in Canada can be found in the vicinity of Toronto Pearson International — the country's largest airport. But don't let the name mislead you — Toronto Pearson is not actually in Toronto but next door in Mississauga, where the circumstances are perfect for a culture of aerospace innovation to thrive.

Since the earliest days of the Silver Dart, which flew just three years after the Wright brothers took to the air in Kitty Hawk, Canada has been a global aerospace pioneer. Then, in the post-war 1940s, with the founding of Avro Canada and others, the industry began to call the area that's now the City of Mississauga its home. The concentration of facilities and expertise that have developed there in the three-quarters of a century since has created a truly unique environment for the collaboration and cutting-edge development that makes Canada a sustained leader in the skies.

# **Canada's Largest Aerospace**

#### A truly international collaboration

At the Mitsubishi Heavy Industries Canada Aerospace (MHICA) plant on Northwest Dr., Mississauga, workers are building wings and fuselages for Bombardier business jets. They've been shipping those parts to Bombardier's Downsview and Montreal locations for years, but soon those deliveries will be going just around the corner to Bombardier's new \$400 million Mississauga facility, set to employ 2,000 workers when it opens in 2023. This investment from Bombardier is a clear testament to the benefit of co-location in an industry hotspot like Mississauga.

"Mississauga is a hub for this industry, making it easier for companies to innovate and be one step ahead of everybody because we collaborate so much and work so well together," says Janet Wardle, President and CEO of MHICA. "And the airport is just a few minutes down the road. Being in Mississauga makes us more competitive as we look to diversify our customers." MHICA has been at its current location in Mississauga, since 2012, and in 2019, it nearly doubled the size of that facility. As a subsidiary of a Japanese multinational, the pancultural character of Mississauga was a huge contributing factor in drawing the company to the city. Wardle recounts that there are 66 flags hanging in the MHICA cafeteria, a testament to the many countries from which their workers have made the pilgrimage to this worldwide magnetic north for aerospace professionals.

### Canadian innovation for a global aerospace community

Even as the city draws more talent and investment from all corners of the world, the homegrown aerospace industry continues to grow and thrive in this diversifying local supply chain. Aversan Inc., a multi-service engineering company that provides critical embedded systems and software for aerospace partners and other industries, has been based in Mississauga ever since the founding of the company in 2003. "Being in an aerospace hub is very, very helpful," says Nikou Morshedi, Director of Operations at Aversan. "The projects we work on are complex and innovative. Co-location and collaboration build trust and efficiency, and that's a big part of our success and our customers' success."

As the industry continues to boom back after the COVID-19 pandemic, the consensus is that there remain even more remarkable heights ahead. "There's so much room for growth here," says Nikou. "Mississauga has a great talent pool which sets us up for success and enables us to grow, expand, and diversify."

The city itself is dedicated to paving the road for that tomorrow by promoting investment and supporting the many local aerospace organizations to which companies like Aversan and MHICA belong. This city is deeply proud of its rich aerospace history and enthusiastic about helping shape an innovative aerospace future.

Learn why world-class aerospace manufacturers choose Mississauga at thefutureisunlimited.ca.





# ECONOMIC GROWTH – EXPERIENCE THE POTENTIAL OF R&D IN ONTARIO

In recent years, Ontario has made a significant investment in research and development (R&D) initiatives within the advanced manufacturing sector. This strategic move is intended to attract more foreign investments and stimulate economic growth throughout the province.

The investment has yielded impressive results, with collaboration between government and industry leading to the creation of new jobs and the development of new technologies and products. The province has also seen an increase in foreign direct investment as a result of these initiatives.

In addition to providing financial resources, Ontario is also focusing on developing its talent pool and improving infrastructure in order to take advantage of opportunities within the advanced manufacturing sector. To this end, it has created specialized training programs for workers and established education partnerships with universities and colleges across the province. It has also invested heavily in research and development (R&D) funding, which provides support for innovative projects in the fields of engineering and technology.

# Ontario's Government's Investment in R&D for the Advanced Manufacturing Sector

Ontario's government has made a strong commitment to investment in the advanced manufacturing sector. They are especially encouraging foreign investors to set up partnerships with Ontario companies, in order to create innovative research and development projects.

By funding projects that aid in technological progress and solutions, Ontario is setting itself up to be an international center of advanced manufacturing. The Ontario government recognizes the importance of continued growth within this sector, and is putting millions of dollars into research and development.

With this encouragement and support, Ontario's advanced manufacturing sector can continue to lead the way in automation, process improvement, and new product development innovation.

### How Research and Development Funding will be Applied in Ontario

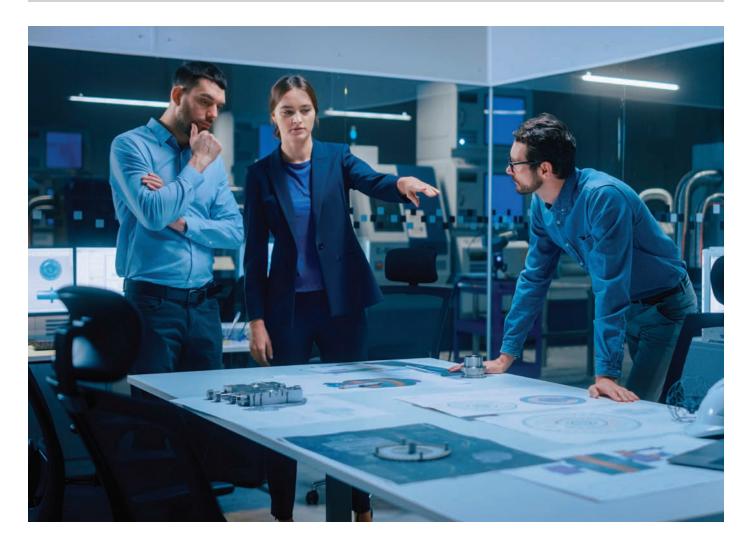
Ontario's advanced manufacturing capabilities are gaining substantial traction in the international economy, making it a desirable destination for foreign investment.

To ensure Ontario remains competitive in this sector and continues to strengthen its production capabilities, provincial funding has been allocated towards research and development. This will be used to support both existing Ontarian businesses and those entering the province from abroad, with the ultimate goal of building Ontario's manufacturing infrastructure for long-term growth and stability in the sector.

# **Benefits of Research and Development Investment**

Ontario is seeing significant positive effects as a result of increased investment in advanced manufacturing, foreign investment and research and development.

#### Perspective



#### [Story Continued from Page 27]

These investments are creating many job opportunities and bringing Ontario's economy back to life. Furthermore, consumer markets are growing as a direct result of investments being made. Due to Ontario becoming the destination of choice for businesses looking to invest, consumer spending has shot up while the unemployment rate has significantly decreased.

Advanced manufacturing, foreign investment and research and development projects have been instrumental in allowing Ontario not only to keep growing economically but also to be at the forefront of technological innovation for years to come.

### Impact on Ontario's Economy and Global Competitiveness

Ontario has long been a leader in advanced manufacturing and foreign investment opportunities, allowing it to steadily contribute to the global economy. Its diverse landscape of research and development initiatives also provides considerable economic benefit to Ontario as an economic powerhouse.

Recent studies show Ontario's continued commitment to being a global leader in terms of its high-quality research, development, and manufacturing capabilities gives it vast potential for even further strong economic performance in the future. Ontario's ability to remain at the forefront of these industries is crucial to maintaining its place as a world leader while fostering job growth within Ontario's borders.

# Strategies for Businesses to take Advantage of this Opportunity for Growth and Success

Ontario's advanced manufacturing sector, which has seen a resurgence in foreign investment, presents a great opportunity for businesses to take advantage of this growth and success. Investing in research and development can help Ontario businesses create more innovative products and technologies while simultancously broadening their market potential both domestically and abroad.

By taking the necessary steps to make their operations more efficient and profitable, Ontario businesses will be in a much better position to maximize their profits while navigating through the global economy. With the Province's business friendly environment providing ample support, now is an ideal time to capitalize on the opportunities presented by Ontario's advanced manufacturing sector.

Ontario's R&D initiatives for the advanced manufacturing sector will no doubt bring about positive economic changes in the province, particularly in areas such as employment, foreign investments, and general economic growth.

The Government has taken a proactive stance towards driving these advancements, and it is clear that their investment is paying off. Through this focus on innovation and industry-driven research, businesses and universities alike can work together to ensure that the province's economy continues to thrive. Indeed, it seems that this approach of targeted investment shows great promise for the continued prosperity of Ontario.

# CITY OF PICKERING EXPANDS ADVANCED MANUFACTURING HUB

The increasingly rare combination of reasonably priced and available land for development near Toronto strategically positions the City of Pickering to continue growing its advanced manufacturing sector, bolstering employment, partnerships, and innovation within the region.

Already home to a mix of cutting-edge and technology-centred companies ranging from equipment manufacturers to last-mile distribution centres and hi-tech bakeries, the Pickering Innovation Corridor is located along Highway 407 and boasts more than 800 acres of land ready for development. In the last five years, two-million square feet of new commercial and industrial space have emerged as one of the largest combined residential, employment and commercial developments in Canada.

Pickering is also adjacent to major transportation routes including Highway 401, 407, and 7. An estimated four million people live within one hour of the City, providing access to a highly skilled and educated workforce needed for office, technology, and skilled manufacturing jobs.

To attract new businesses and assist those already in place, the City of Pickering's Economic Development & Strategic Projects Department offers concierge-style services.

"Whether it's being connected to suppliers or customers, any kind of introductions, or whether it's looking for new space to be able to expand, we're there to help facilitate discussions and streamline the process," explains Fiaz Jadoon, Director, Economic Development & Strategic Projects.



If a company is looking for a location to set up operations, has a timeline, and conforms with zoning and other requirements, the City purchases the lands on behalf of the end user from the Province (who owns majority of the Innovation Corridor lands). The land is then sold, at no profit to the City, to the end-user, representing a significant cost savings to the company. Once land is secured, the City continues offering support by facilitating discussions to expedite many aspects of development including site plan applications and servicing.

Local post-secondary institutions such as Durham College and Ontario Tech University provide hands-on training and match their offerings to teach in-demand skills. Durham College's new Ontario Power Generation Centre for Skilled Trades and Technology creates opportunities to advance innovation and knowledge, and provides a career launchpad for the next generation of skilled tradespeople.

"We're centered around creating a community to live, play, and work. Pickering has a proven track record, and we are ready to attract more residents and business investments," says Jadoon.



SmartCentres Industrial Groundbreaking with lead tenant, Lastman's Bad Boy Head Office

SmartCentres' 233,000 sq.ft. industrial complex in Pickering's Innovation Corridor is estimated to be complete in 2023



Economic Development & Strategic Projectsinvest@pickering.cainIm@investpickering905.420.4625f@cityofpickering



# **EXPLORING THE ADVANTAGES OF INVESTING IN MANUFACTURING REAL ESTATE**

As a hub for international trade, with access to both the US and Canadian markets, Ontario is an attractive choice for businesses looking to expand their operations. The province offers several tax incentives and other benefits that can reduce the cost of doing business while providing businesses with access to a highly skilled workforce.

In addition to the economic benefits, Ontario offers a wealth of opportunities for companies seeking to establish a presence in the province's advanced manufacturing sector. With its well-established infrastructure and abundance of resources, companies looking to invest in advanced manufacturing can benefit from a range of specialized services including research and development support, technical training programs, and expert advice on how best to maximize their investments.

Ontario also provides businesses with access to some of the most innovative technologies available today, such as robotics and artificial intelligence (AI). These technologies are already being used by many leading companies in the industry and offer businesses the potential for increased efficiency, improved quality control processes, and cost savings.

By investing in Ontario's advanced manufacturing sector foreign investors can take advantage of these unique opportunities while also benefiting from the local consumer market. With its growing population and vibrant economy, Ontario offers an attractive destination for investors looking to make long-term investments that will yield strong returns over time.

# Ontario Advanced Manufacturing Real Estate Sector – Buy, Build, and Design for Success

Ontario is fast becoming a hub for the advanced manufacturing sector, and that presents a major opportunity for those looking to invest in real estate.

Ontario has recently seen an influx of foreign investments into processes like automotive, aerospace and pharmaceuticals production, making it an ideal location for capturing these manufacturing gains. With the right investment strategy, Ontario investors can secure returns that extend far beyond traditional real estate.

The array of foreign investments combined with Ontario's commitment to technological advancements offers lucrative opportunities that shouldn't be overlooked by serious real estate investors.

# The Current Economic Climate and its Outlook on Real Estate Investments in the Industry

Ontario's current economic climate is poised to benefit from advanced manufacturing, foreign investment and its ever-growing commercial real estate industry.



With the Ontario economy continuing to expand, the outlook is positive for investments in the commercial real estate sector. While certain factors can impede growth in this area, such as overbuilding or supply imbalances, prospective investor confidence should remain strong due to sound analysis that suggests Ontario has a fundamentally secure and robust base of commercial real estate investments.

This includes both domestic investments from Ontario entities as well as foreign investments from outside the Province. All of these trends point toward a constructive future for Ontario's commercial real estate industry and with it, continued opportunity for investment capitalization.

# Investing Strategies to Consider when Entering the Advanced Manufacturing Market

Investing in Ontario's advanced manufacturing sector can be a great way for businesses to capitalize on the growth of this industry. When considering an investment strategy, it is important to factor in Ontario-based foreign investments as well as specific commercial real estate opportunities that could benefit from the increased demand for advanced manufacturing products generated in Ontario.

With its robust infrastructure and skilled workforce, Ontario is an ideal place for investors to focus their resources and maximize returns on these types of investments.

# Tax Incentives and Other Government Support for Companies Investing in this Sector

Ontario is pushing for increased foreign investment and advanced manufacturing by offering several incentives and grants for businesses to invest in the sector. These include corporate tax credits, deductions for commercial real estate, and even additional subsidies for research and development costs. With Ontario's numerous government support initiatives, businesses of all sizes can capitalize on these exciting opportunities to break into the industry and increase their global competitiveness.

### Tips for Finding the Right Investment Property Within this Booming Industry

Ontario's advanced manufacturing industry has experienced huge booms recently due to foreign investment, providing a unique opportunity for potential investors to take advantage of the increased trends in commercial real estate.

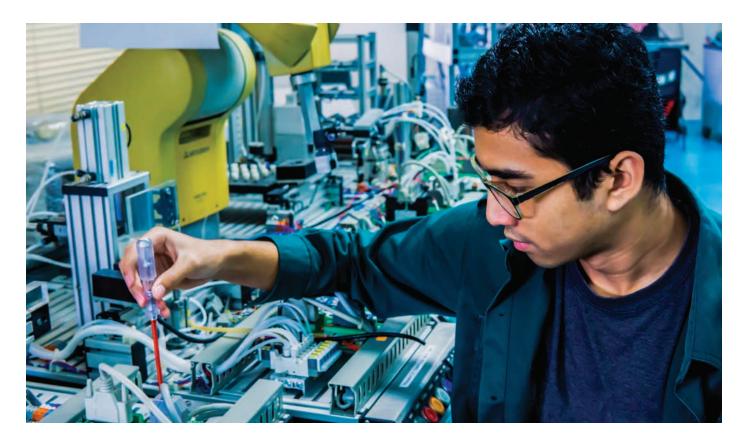
For those looking to invest in Ontario, due diligence is key - researching the area and any current renters or properties can provide greater insight into future returns. It is additionally wise to consult with a local real estate expert as they have insider knowledge of both the economic and political climate and can provide guidance on the best investments for a particular location. Ultimately all Ontario investors need to think long-term when jumping into this booming industry.

Establishing a presence in Ontario's advanced manufacturing sector presents businesses with the opportunity to tap into several economic benefits, as well as access world-class infrastructure and resources.

With their state-of-the-art facilities and robust support services, companies in Ontario can look forward to comprehensive research and development assistance, comprehensive technical training programs, and the necessary expert advice to ensure that their investments are yielding the best possible returns.

Additionally, entrepreneurs interested in setting up shop in this sector can rely on access to advanced technologies and plenty of qualified personnel. Investing in Ontario's robust advanced manufacturing sector is sure to bring untold possibilities for both established businesses and eager entrepreneurs alike.

#### Perspective



# TAP INTO ONTARIO'S ADVANCED MANUFACTURING Network to build global growth

Ontario is home to some of the most talented people in the world, making it an ideal location for companies within the Advanced Manufacturing Sector. Ontarian workers possess a range of technical and management skills that enable them to quickly adapt and respond to changing industry trends. This flexibility ensures that businesses in the province remain competitive at the global level.

Ontario is the perfect home for those looking to capitalize on advanced manufacturing and attract foreign investment. As one of the most highly educated workforces in the G7, Ontario allows businesses to tap into a talent pool of qualified individuals.

Moreover, companies can work with colleges and universities to develop programs that will ensure they have employees with all the right skills needed to succeed in today's economy. Investing in Ontario makes excellent business sense as there are many opportunities to seize atop an educated workforce.

# **Highly Educated Workforce**

Ontario is an ideal destination for foreign investors in advanced manufacturing. Ontario boasts a highly educated and skilled workforce with experts in many areas that are necessary for successful operations within the sector. In fact, Ontario has the highest concentration of post-secondary graduates in Canada.

This makes Ontario attractive to international companies looking to form partnerships or set up operations within the crucial advanced manufacturing arena. With such dedicated and talented individuals behind them, these companies can rest assured of high-quality output to meet customer demands. Ontario's workforce is not only reliable but also talented, proving to be invaluable assets for the benefit of both local and foreign investors.

# **Friendly Approach to Immigration**

Ontario's welcoming approach to immigration, applauded by many throughout the country and across the globe, is a key advantage of choosing Ontario as a place to invest in advanced manufacturing.

Through our Global Skills Strategy Program, Ontario can fast-track visas for highly skilled workers from any country to Ontario's shores within 10 business days. By leveraging our foreign investment and talent capabilities, Ontario is opening the door to an ever-expanding wealth of potential growth opportunities suitable for any business venture.

# **Developed Co-Op and Internship Programs**

Ontario's forward-thinking co-op and internship programs are helping local advanced manufacturing initiatives thrive. With the support of employers, students and government agencies like Ontario Centres of Excellence, businesses are able to hire talented graduates prepared to join their organizations as industry-ready workers.

#### Perspective



Not only does this improve job prospects for Ontario's youth, but it also attracts foreign investment opportunities for dynamic growth in the Ontario economy. Through these co-op and internship programs, Ontario is creating an efficient and transparent system that provides industries with qualified talent from even more well-trained professionals.

### **Well Educated Graduates**

Ontario is making great strides towards a more competitive and financially sound future with its inception of a network of highly ranked universities and colleges.

This ensures that graduates are consistently well-educated and trained to think innovatively and outside the box – particularly in the field of STEM, with 55,000 new grads each year prepared for anything their industries may throw at them.

As such, Ontario's advanced manufacturing industry is increasingly attractive to foreign investors seeking out talented personnel, allowing Ontario citizens to benefit from an influx of fresh jobs and financial stimulus as companies establish themselves in the province.

### **Qualified Engineers**

Ontario is an economic and technological hub for the world. With its vast selection of qualified engineers, Ontario is the ideal state for foreign investment, advanced manufacturing, and other tech-related works.

This access to skilled talent proves Ontario's prominence in developing cutting-edge innovations that helps drive their booming economy. As part of the G7 countries, Ontario is showing its strength as a leader in all areas—one of those being engineering.

Ontario's dedication to providing quality sources of educated and technical professionals often surpasses even its own expectations; thereby demonstrating Ontario's ability to remain top contenders in an ever-changing global market.

### **Abundance of Talent**

Ontario has an abundance of talented individuals that are eager to contribute to the advanced manufacturing sector.

The sector in Ontario plays a key role in the nation's economy, employing hundreds of thousands of skilled workers and generating massive amounts for foreign investment. By harnessing the natural talent Ontario has to offer, this sector will grow exponentially, meaning increased job opportunities and local success stories.

Ontario remains a key player on the world stage when it comes to advancing manufacturing, with incredible potential that can be tapped into by cultivating homegrown talent.

Consequently, the high-level skills of Ontario's workforce make the province an attractive home for businesses within the advanced manufacturing sector. To take advantage of these advantages, businesses must continually innovate their processes, investing in technology and training to ensure that they remain current with emerging trends.

Businesses which successfully do this will be well-positioned to compete on an international level – creating jobs and driving economic growth for Ontario for years to come. By embracing the wealth of talent and resources available in the region, companies can give themselves a strategic advantage in one of the most important industries of today.

#### ⊃erspective™



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# WELCOME TO ONTARIO. GET SETTLED, FIND HOUSING, A JOB & CHILDCARE

Ontario is home to a thriving Advanced Manufacturing sector that has become the backbone of the province's economy. The manufacturing industry boasts a total output of more than \$240 billion and employs over 500,000 people across the province. This has resulted in a high quality of life for those employed in this sector and their families due to the industry's strong wages, benefits, and long-term stability.

Manufacturing in Ontario is supported by a diverse range of industries that produce a wide variety of products from automobiles to medical devices. Automotive manufacturing accounts for the largest portion of the province's output with more than \$80 billion globally being exported out of Ontario in 2017 alone. Additionally, the province is home to some of the world's best aircraft and aerospace companies, leading medical technology firms, cutting-edge green energy producers, and more.

# **Advanced Manufacturing in Ontario**

Ontario has become a global leader in advanced manufacturing, welcoming substantial foreign investment and providing thousands of residents with wellpaying jobs.

The province's commitment to being an innovation-driven economy has spurred significant investment in research, development and cutting-edge technologies. Ontario's workforce is competitive on a global scale, benefitting from some of the continent's top technical and educational institutions. An increase in high-tech jobs has resulted in a higher quality of life, with excellent public health and education systems that support stable communities.

Recent developments mean Ontario is well-placed to remain a powerhouse of advanced manufacturing for years to come.

### **Benefits of Working with Ontario-based Companies**

Ontario is an attractive region for advanced manufacturing thanks to its proximity to the US and Europe, lower business taxes, and strong foreign investment support.

The Ontario government has worked hard to promote advanced manufacturing in recent years, with a range of support. In particular, Ontario-based companies benefit from access to essential infrastructures across the entire value chain as well as other customized assistance programs.

Working in Ontario's advanced manufacturing field also means a high quality of life due to Ontario's vibrant economy and healthy job market resulting in excellent living standards for employees. This combination creates an ideal environment for those looking to work in advanced manufacturing in Ontario.

# Ontario has an Open-door policy with a Great Quality of Life

Ontario is a top destination for foreign investment in advanced manufacturing, consistently drawing global attention with the high quality of life that its citizens enjoy.

The Ontario government is dedicated to creating an environment of innovation and encouraging advanced manufacturing investments to ensure economic growth. By focusing on improving the quality of life associated with advanced manufacturing jobs, Ontario has opened the door to increased foreign investment. From offering competitive wage increases to making capital investments in job creation, Ontario is proving that it is a leader in providing employment opportunities with a strong focus on workers' well-being and improved quality of life.



### Ontario Businesses have Access to Free Training and Support

Ontario is embracing the global economy and recognizing advanced manufacturing industries as key drivers of Ontario's success. Investing in education and skills development for advanced manufacturing workers not only provides employment security, but it presents a unique opportunity to boost Ontario's economy through foreign investment.

Quality of life can also be improved by providing opportunities for education and training to workers, allowing them to benefit from higher wages and better job prospects. Investing in our workforce in Ontario is critical not only for economic growth, but to give the people of Ontario a chance to succeed.

### Support from Government Programs to Help Maintain and Grow the Advanced Manufacturing Sector

Ontario is putting a large emphasis on maintaining and growing the advanced manufacturing sector to provide stability, quality of life, and jobs for its citizens.

To do this, the Ontario government has plans in place to encourage foreign investments with tax credits and grants, as well as providing free services to Ontario businesses such as training and support to expand their products into new markets.

Furthermore, Ontario offers programs such as apprenticeships in advanced technology programs and initiatives to develop innovative manufacturing processes. All of these measures are meant to ensure that Ontario's advanced manufacturing sector continues to deliver lasting economic growth for generations to come.

# Open for business. Jobs are Available in a Friendly Environment

Ontario's advanced manufacturing sector is of great interest to prospective job seekers with foreign investments creating job opportunities in factories, research and development centers, and laboratories. Taking advantage of these investment-driven job opportunities requires a particular set of strategies tailored to Ontario's economy.

Competitors for employment in Ontario's advanced manufacturing sector include both local residents and other qualified candidates from around the world. In addition to being well-versed in the field, applicants must ensure resumes demonstrate Ontario's business-friendly environment, well developed infrastructure and high quality of life as factors that could be attractive to employers.

Keeping informed about Ontario's industry news and forging strategic relationships within the province can go a long way towards unlocking opportunities successfully offered by Ontario's advanced manufacturing sector.

All in all, Ontario's Advanced Manufacturing sector can be considered an integral part of the province's economy. It is instrumental in creating jobs and contributing to both a high quality of life among those employed and strong wages.

The diverse range of industries support a great variety of products; globally, Ontarian exports alone exceed \$80 billion dollars. With world-class aircraft manufacturing, automobile production, and medical devices available, there is no doubt that product quality and performance have enjoyed significant growth in recent years.

Moving forward, it will be interesting to witness how Ontario's advanced manufacturing industry continues to expand and contribute more to Canada's shared prosperity. There is certainly much logic to value such an important economic contributor as the future of business should surely continue to clarify its importance within the provincial economy even further.



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