

STEM MONTESSORI



ACADEMY OF CANADA



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 **BRAMPTON**
futureready****
ECONOMIC DEVELOPMENT: STEM



BRAMPTON INNOVATION ECONOMIC DEVELOPMENT

Overview:

In a long-term effort to make a positive impact to the immediate community and education sector across Canada, the STEM Montessori Academy of Canada (SMAC) provides many educational, social and economic benefits, serving as an important entity of viability and vitality. As a federally registered not-for-profit fully accredited by the Ministry of Education, SMAC brings social programs, economic development, jobs, core values and educational value through science, technology, engineering and math, the educational disciplines known as STEM. These social and economic benefits will aim to provide STEM Immersion learning opportunities that develop both academic and extra-curricular competencies and provide conditions for life-long learning, creating global leaders and lasting economic development results locally, nationally and internationally.

The Problem:

- There are insufficient STEM-focused elementary and secondary school options due to lack of resources and STEM trained instructors/teachers who can effectively teach the disciplines traditionally.
- It is estimated that 2.4 million STEM jobs will go unfilled in North America by the end of 2020.
- Minorities and females are deeply underrepresented in STEM fields—just 2.2% of Latinos, 2.7% of Africans, and 3.3% of Natives have earned a university degree in STEM fields.



STEM education is among the most competitive and sought after programs in the world. STEM promotes innovation, critical thinking, and science literacy. In today's world of ever-evolving technology, the trajectory of the future of education and the career sector is contingent on an increased need for basic and advanced application and understanding of math and science.



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Brampton - Economic Development Strategy

Brampton is dedicated to maintaining a balanced approach to growth and seeking out new opportunities to bring highly-educated, knowledge-based employment and partnerships for innovation to the community.

Brampton's Economic Development Strategy uses its community's steady growth to maintain a simple yet unique approach to generate job creation and investment as per the Brampton 2040 vision which refers to the DNA of the entire vision as: **sustainability, livability, diversity, and health**.

We seek to provide a value proposition to the 5 Lens approach as outlined in the 2040 vision proposal being: Public Engagement , Collaboration, Design, Technology, Identity.

The feasibility of success of these lenses can be approached through these common denominators;

- 1. Attraction**
- 2. Growth**
- 3. Innovation**

STEM Canada wishes to contribute to the community of Brampton by educating students from a young age through STEM-Immersion based learning. By investing in STEM education both in the public and private sector, SMAC will fill the void of lack of opportunity and accessibility of STEM-based education and programs to yield a future ready Brampton.



Brampton - Economic Development Strategy : ATTRACTION

ATTRACTION: Focusing on education and business attraction by raising awareness of Brampton's value proposition

Response: Cross Function of Business Incubators and Education Incubators Within Schools and the Community

Evidence shows that STEM mentorships inspire young people to better engage with, and continue to study, STEM subjects and explore STEM careers.

SMAC aims to partner with local businesses and new businesses by creating incubator programs within the business itself for STEM- based learning to create learning opportunities and mentorship, increasing business engagement. Existing STEM- based companies will provide business assistance, training and mentorship through partnership with our education incubators and our SMAC National Leadership Program. This process nurtures young learners and attracts businesses who wish to grow and build up Brampton.

This proposal also promotes talent attraction & retention and creates and trains tomorrow's leaders to contribute to Brampton's future growth and innovation profile.

With public funding issues playing a key factor in the lack of STEM opportunities in schools, SMAC wishes to work with public sectors of education to create STEM-hives and mobile workshops to underserved communities. This effort will aim to maximize exposure to STEM-based learning opportunities. Cross functional incubators sees the partnership between STEM- based businesses, our National Leadership Program in addition to education incubators within schools to aid as mentorships, to understand why STEM subjects are important and how they can be applied in the workplace. This practice will enrich young people's knowledge of STEM careers and the opportunities available.



Brampton - Economic Development Strategy: **GROWTH**

GROWTH: Retaining and supporting existing businesses that contribute to a strong local economy.

Response:

The SMAC STEM program was created in response to the growing importance of scientific and technological literacy among students to best prepare them for post-secondary education and for the jobs of tomorrow domestically and across the globe.

Expanding education locally and nationally across our service offerings, SMAC seeks to foster growth and development within Brampton through STEM leadership programs, STEM Immersion full day learning, community workshops, education incubators and our partnered economic development initiatives to create growth and innovation in the STEM sector overall.

Education programming is a powerful catalyst for local expansion. The education sector and unique educational programming provides an opportunity for exponential growth within the city attracting students both local and international, families, partnerships, jobs and international partnerships within the sector resulting in increased revenue, economic growth and expansion for the city.

STEM programs in general, provide an invaluable source of development, fosters tangible educational value and life skills, and impacts the student instilling STEM literacy and analytical logic.



Brampton - Economic Development Strategy: GROWTH

GROWTH: Retaining and supporting existing businesses that contribute to a strong local economy

International, Economic Development Opportunities:

Many businesses today operate on a global scale. Children who study at international schools can feel confident when looking for career opportunities because of their exposure to various world cultures, languages, and educational opportunities.

Investment in international education and the international marketplace is paramount to economic development in Brampton. Our in person and online international program attracts not only students, but international investors and business partnerships, generating more local jobs, boosts the immediate economic climate, increases Brampton's international profile, and enhances the city's revenue stream.

Our international partnership program services students who wish to study in Canada, in addition to funding and partnership opportunities coming in internationally to support global investment in educational STEM opportunities. We seek and form international partnerships with schools in addition to international corporate investment in our programs that sees monetary investment and assistance to provide scholarships for their home country students to study in Brampton. Our STEM program has currently attracted international innovation business partners in multiple countries.

Additional Partnership EcDev Initiative:

Promotion of the Start-Up Visa Program by Government of Canada

Investment Amount into the city: \$5,000,000 into Brampton

Permanent Residency option through the Canada Investors Visa Program.

Brampton - Economic Development Strategy: INNOVATION

Brampton – 2040 Vision

INNOVATION: Supporting local innovation and partnerships that bring new expertise and opportunity into Brampton

Response:

SMAC wishes to foster a growing, competitive and knowledge-based Brampton. We will contribute to the local economy to improve conditions for learning by creating opportunity, accessibility and affordability of STEM-based services.

Our programs contribute to boost economic development by create globally competitive young people to promote an innovative, progressive and competitive marketplace.

Innovation helps local businesses remain competitive. SMAC hopes to prepare Brampton for Innovation Readiness by training young people to be competitive enough to fill and **create** innovation jobs within the city, and to be critical thinkers. Adequate opportunity and accessibility to STEM education will deeper develop interest in new and existing innovation initiatives within Brampton's businesses based on an innovation trend and the growing needs of the city. SMAC will have contributed in the creation of STEM-trained employees AND enhance Brampton's innovation profile overall.

With Brampton emerging as one of the fastest growing communities in Canada, SMAC wishes to partner with the Economic Development team to develop Brampton's STEM innovation profile as a world-class region measured by talent, productivity and quality of life.

Access to affordable STEM opportunities foster and promote the establishment and foundation of problem-solving, innovation, critical thinking, and STEM literacy. This is fundamental and critical to the future vision of Brampton.



**BRAMPTON INNOVTION
ECONOMIC DEVELOPMENT**



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Key Sponsors / Partnerships:

- Maple Leaf Sports and Entertainment (MLSE)
- Microsoft
- Ryerson Innovation Center
- Vector Institute
- Queen's University
- University of Victoria
- University of Calgary
- University of Toronto
- Sherbrooke University
- Ellis Don
- Ontario Power Generation
- Sheridan College
- Ontario Science Center

International Partners:

- Sirena Technologies - India
- TextHelp
- IET - Institution of Engineering and Technology - UK
- African Network of Scientific and Technological Institutions

Acquisition:

As we have been operating at CPS for our 4th year, SMAC has made both an investment of monetary and social capital into the building and community. Our request is for the city of Brampton to offload the asset of Central Public School to the STEM Montessori Academy of Canada as a purchase and investment in STEM innovation and economic development through our services.

The Acquisition of CPS by SMAC will :

- Generate revenue for the city of Brampton via: the sale, future remittance of property taxes.
- Increase jobs within Brampton in the STEM and education sector.
- Relieve the city of utilizing tax dollars to maintain the underutilized building.
- Advance innovation.
- Advance the Brampton 2040 vision.
- Advance the economic development initiatives for the city of Brampton.
- Attract local and international students, international investment and global trade.
- Utilize CPS as an education incubator for STEM-based learning and services.
- Utilize CPS as a headquarters for community STEM-based training, workshops, and community STEM learning hub.
- Serve as a local and international academy location for full-time STEM Immersion and innovative learning in Brampton
- Aid to break down barriers to promote opportunity, accessibility and affordability of STEM-based services in the city
- Promote diversity and inclusion within the city and STEM sector that sees high underrepresentation from females and visible minorities.

We wish to move forward with the purchase of the school to begin this STEM-learning innovation hub, while fully retaining CPS's "Heritage Building" status.