



# DOWNTOWN BRAMPTON UNIVERSITY AND CENTRE FOR EDUCATION, INNOVATION AND COLLABORATION

## Economic Impact Statement

Brampton, Ontario

Prepared for The Corporation of the City of Brampton

November 6, 2017



This document is available in alternative formats upon request by contacting:

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November 6, 2017

Bob Seguin, Advisor to the CAO  
The Corporation of the City of Brampton  
2 Wellington Street West  
Brampton, Ontario  
L6Y 4R2

Dear Mr. Seguin:

**RE: Downtown Brampton University and Centre for Education, Innovation and Collaboration – Economic Impact Statement (Brampton, Ontario)**

urbanMetrics inc. is pleased to submit our report evaluating the economic benefits of establishing a Centre for Education, Innovation and Collaboration (CEIC) in conjunction with a new university campus in Downtown Brampton. This report identifies the transformative economic benefits that will be derived from the construction and operation of these facilities. These benefits include increased economic growth, additional jobs and labour income, reoccurring tax revenue, skills development and fostering a culture of innovation and collaboration that will benefit future generations in Brampton.

We appreciate the opportunity to conduct this assignment on your behalf and we look forward to discussing the results of our report with you.

Yours truly,

urbanMetrics inc.

A handwritten signature in black ink, appearing to read "P. Thoma", with a long horizontal stroke extending to the right.

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# 1.0 INTRODUCTION

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## INTRODUCTION

Expanding access to education and providing residents with the tools they need to become fully engaged in civic life represents one of the biggest opportunities for municipal governments today.

The City of Brampton is committed to a future that sees its residents, its businesses and its community organizations working together to help build a *future-ready city* that supports creativity, innovation, and life-long learning opportunities.

For the past 50 years, the City of Brampton has been defined by its capacity to plan and manage growth. Over a relatively short period of time, Brampton has emerged as Canada’s 9th largest city (in population terms), and has become one of North America’s most attractive locations for new immigrants. According to the 2016 Census, more than 52% of Brampton residents were born outside of Canada, and 48% have a mother-tongue other than English.

Over the next 30 years, Brampton’s future will continue to be defined by growth. Official projections suggest that another 348,000 new residents will call Brampton home. By 2041, Brampton will have a residential population base of 890,000, which would be larger than present day Halifax, Regina, St. John’s, Victoria and Fredericton combined.

Despite its size, the City of Brampton has yet to realize the full potential of two of its strongest and most compelling assets –its residents and its downtown. We believe this is poised to change.

The City of Brampton currently finds itself at a defining moment in time.

Major investment initiatives supported by the Provincial and Federal governments will see new money flow into key portfolios such as transit, healthcare, research & development, and education. These so-called *strategic investments* all have direct and meaningful impact for Brampton residents and will, to varying degrees, be targeted to specific nodes such as Downtown

Brampton, which have already been defined in provincial policy as preferred candidate locations for community-based investment in major infrastructure.

In recognition of the growing role that suburban downtown areas—such as Brampton—are expected to play in the economic and social well-being of the Toronto-region, governments, major institutions and private business are looking for best-in-class locations that are served by high-frequency transit service, modern infrastructure, and pre-existing amenities such as shops, restaurants, parks and other meeting spaces to provide dynamic work environments.

Over the past decade the City has made several positive strides. A new performing arts centre. A new civic building. A new civic square. Collectively, these initiatives have helped move the needle in Downtown Brampton. They have encouraged other property owners to make much needed investments in under-utilized assets, but there is more to be done. At this juncture, the City of Brampton is moving forward with an ambitious plan that will bring about bold changes to its downtown. A number of “game-changing” investment options have been identified as policy-led vehicles for re-energizing Downtown Brampton.

This report focuses on two specific game changing options which could have a dramatic impact not only on the City’s downtown, but indeed the entire City of Brampton:

- a new university campus (championed by Ryerson-Sheridan); and,
- a new community-based learning centre (championed by the City of Brampton).

This report provides the City of Brampton with an evaluation of the economic and broader community benefits that would be realized through the parallel creation of these two entities in Downtown Brampton. The contents herein are intended to provide Brampton Council, staff and residents with a baseline understanding of how direct municipal involvement in these two projects



could be leveraged as a catalyst for more balanced growth, and as a mechanism to ensure that Brampton residents are empowered with the tools they need to build the type of future-ready city they desire – one that is supported by creativity, innovation and life-long learning.

*Persistent education and learning are the reality as people march through their days with their smartphones and, soon, the Internet of Things embedded everywhere. The library as people, place and platform is the new knowledge institution that can serve all those needs.*

-Lee Rainie, Director of the Pew Research Center Internet Project

## BACKGROUND

On December 20, 2013, the Ontario Ministry of Advanced Education and Skills Development (MAESD)<sup>1</sup> released its Major Capacity Expansion Policy Framework. This policy document outlined the Province’s commitment to provide additional funding for upwards of 60,000 new post-secondary education spaces across the province. Submissions for funding under this framework were due in September 2014. Based on the submissions received, a partnership submission between York University and the City of Markham selected, green-lighting the construction of a new campus in Markham Centre.

On May 20, 2015, the Province announced they were planning a second competitive call for proposals under the Major Capacity Expansion Policy Framework. This round would canvass new submissions designed specifically to serve growing student needs within Peel and Halton Regions.

On July 8, 2015, Brampton City Council endorsed the creation of a Blue-Ribbon Panel comprised of industry, government, academic and community leaders to provide a realistic and achievable work plan and financial figures for a university campus in Brampton.

The Blue-Ribbon Panel was tasked with the preparation of a business case that would help strategically position Brampton as a viable candidate city that

could meaningfully accommodate the expansion of undergraduate and graduate academic learning in Ontario.

In September 2015, urbanMetrics inc. was retained by the City of Brampton to help support the Blue-Ribbon Panel’s understanding of local and regional economic benefits associated with a new (hypothetical) university campus.

The purpose of this study was to identify the range of financial and non-financial benefits that would accrue to the City of Brampton should a new university campus be awarded to the City. The findings of our 2015 study, concluded that there would be a compelling business case for expanding post-secondary educational offerings in Brampton.

On October 26, 2016, the Province of Ontario announced a funding commitment for a new university campus in the City of Brampton.

On March 14, 2017 the MAESD identified that Ryerson University, in partnership with Sheridan College, submitted an application to establish a new facility in Brampton. It is anticipated MAESD will announce final details of the new facility, including formal funding, timing, location and other funding partners in late fall 2017.

## SCOPE OF THIS STUDY

In September 2017, urbanMetrics was retained by the City of Brampton to consider the additional (and cumulative) benefits that would be realized through the proposed development of a new, complementary, yet stand-alone facility that would be developed near or adjacent to the City’s new university campus.

It is assumed that this facility, referred to as the Centre for Education, Innovation and Collaboration (CEIC), would be built by the City of Brampton for the full benefit of all Brampton area residents.

<sup>1</sup> Formally the Ontario Ministry of Training, Colleges and Universities (MTCU).

This new facility would be designed and implemented in a way that clearly articulates Brampton’s ongoing commitment to life-long learning, innovation and collaboration.

While detailed programming is beyond the scope of this study, the intention is to create a new landmark space in Downtown Brampton. The facility will become a new hub for individuals, community groups, businesses and cultural organizations that understand the importance of collaborative, peer-to-peer learning and community-based partnerships.

The overarching vision for the CEIC is a facility that provides a future-ready platform for individuals and organizations to achieve productive, collaborative and deeply enriching learning experiences.

In simple terms, the CEIC would be a flexible building featuring collaborative activity zones that are functionally supported by a network of partnership-based outreach programs designed to enable individuals and groups to reach their full potential.

The intent is to create a modern reinterpretation of the public library. The CEIC would be a place where residents *of all ages* learn from peers and mentors. The CEIC would be a place where discussions lead to shared understanding. A place where collaboration leads to innovation. Where innovation leads to better outcomes. Where better outcomes lead to more dynamic and connected community.

## APPROACH

In support of this business case, urbanMetrics inc. has been retained to prepare an updated Economic Impact Statement related to the local and regional benefits of both a major university campus with 5,000 full-time equivalent (FTE) students and the development of a new 200,000 square foot civic building that would be developed as a CEIC.

The quantitative economic impacts of a new university campus and CEIC in the City of Brampton have been estimated using the Statistics Canada Input-Output model, which simulates the flow of expenditures through the Canadian economy. The model provides a reliable measure of the following four economic impacts:

- Gross Economic Impact;
- Employment;
- Labour Income; and,
- Tax Revenues to the Three Levels of Government.

The range of impacts include the one-time impacts related to the construction of the facility, the ongoing impacts related to the annual expenditures necessary to operate the university and ongoing impacts related to student and visitor spending.

In preparing this Economic Impact Statement, the following work steps have been undertaken:

1. Quantification of the economic impact of a university and CEIC locating in the City of Brampton has been estimated using the Statistics Canada Input-Output model, as detailed in Appendix A.
2. Identification of qualitative benefits associated with a university campus and CEIC locating in the City of Brampton. This includes the benefits associated with fostering entrepreneurship, increased business start-up activity, improved youth employment and increased earnings potential for Brampton residents attending the university.
3. Demonstrate the value for money of a municipal contribution towards a new university campus and CEIC.

## CAVEAT

This report is focused primarily on the economic impact of a new university campus and CEIC in the City of Brampton, including the financial and non-financial (i.e., community) benefits that are expected to accrue to the municipality.

Our report is not intended to capture all of the extraneous benefits or costs that might be expected to accrue to Brampton. We recognize, for example that a new university campus could also have potential positive impacts on areas such as accelerated commercial and residential growth patterns, additional investments in public transit, and improved environmental outcomes. These matters, while important, fall beyond the scope of this Economic Impact Statement.

## WISE WORDS

*In recent years, a rising number of innovative firms and talented workers are choosing to congregate and co-locate in compact, amenity-rich enclaves in the core of central cities. Rather than building on green-field sites, marquee companies in knowledge-intensive sectors are locating key facilities close to other firms, research labs and universities so that they can share ideas, and practice “open innovation.” ... A growing array of entrepreneurs are starting their companies in collaborative spaces, where they can mingle with other entrepreneurs and have efficient access to everything from legal advice to sophisticated lab equipment ... A growing share of metropolitan residents are choosing to work and live in places that are walkable, bike-able and connected by transit and technology.*

-Bruce Katz, Director, Metropolitan Policy Program, Brookings Institution

*Libraries have always been an economic driver of communities. Libraries are like Starbucks without the coffee: an important place to build social connections. Anyone can use it.*

-Robert Harrison, City Administrator, Issaquah, Washington

*Whether you build a new library or transform an existing one, do not build the best library of the previous century. Create an environment that facilitates new patterns of interacting, learning and accessing information, and is sufficiently flexible to accommodate changes that inevitably will come.*

-Peter Gisolfi, Architect

*The physical library will become less about citizens checking out books and more about citizens engaging in the business of making their personal and civic identities. The physical library must undergo a transition that embraces the openness and flexibility needed to thrive in a world of constant change. Central to this flexibility is creating spaces that can adapt to the changing operation models of libraries.*

-Amy Garner, Director, Apsen Institute Dialog on Public Libraries

*If current trends are any indication, innovation districts will continue to grow in size and scale, fuelled by market and demographic dynamics, open innovation, local leadership and place-based investments of large anchor institutions. But if innovation districts are to realize their full potential, then asset-rich companies, civic entities and financial institutions need to invest at scale. Higher levels of government also need to act with more predictability and purpose*

- Bruce Katz, Director, Metropolitan Policy Program, Brookings Institution

## **2.0 CONSTRUCTION IMPACTS (ONE-TIME)**

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## DOWNTOWN UNIVERSITY

As identified in our 2015 report *Economic Impact Statement Major University Capacity Expansion*, the establishment of a new university campus in Brampton would have transformative impacts on the community.

This section of the report briefly summarizes the findings in our previous work and updates the economic impacts to reflect current dollar values (2017).

The **one-time impacts** associated with the construction of a new university campus in Downtown Brampton is expected to have a significant impact on employment, wages and tax revenue in the City.

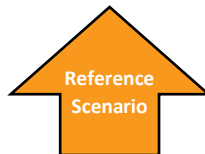
As shown in Figure 1, the initial phase of a new university campus supporting the first 1,000 students is expected to result in a one-time capital investment of approximately \$43.0 million (this figure represents an estimate of the total capital cost of building an institutional building in the GTA large enough to support an initial base of 1,000 post secondary students).

Total construction costs are expected to increase as more students are accommodated. These costs are further summarized in the table below.

**Figure 1: Estimated University Construction Costs**

	Full-Time Enrolment			
	1,000	5,000	10,000	20,000
Academic and Support Space	59,200	293,900	586,600	1,173,300
Non-Academic Space	58,100	288,500	575,900	1,151,700
<b>Total Space (sq.ft.)</b>	<b>117,300</b>	<b>582,400</b>	<b>1,162,500</b>	<b>2,325,000</b>
Hard Construction Costs	\$32,120,000	\$160,400,000	\$320,800,000	\$641,600,000
Soft Construction Costs	\$10,900,000	\$54,700,000	\$109,400,000	\$218,800,000
<b>Total Construction Costs</b>	<b>\$43,020,000</b>	<b>\$215,100,000</b>	<b>\$430,200,000</b>	<b>\$860,400,000</b>

Source: urbanMetrics inc.



For reference purposes we have considered the impacts of a university campus that achieves a **student enrollment of 5,000 students**. A campus developed in Brampton at this scale is expected to cost approximately **\$215.1 million**. Based on an input-output model the economic impacts of this level of investment would yield the following

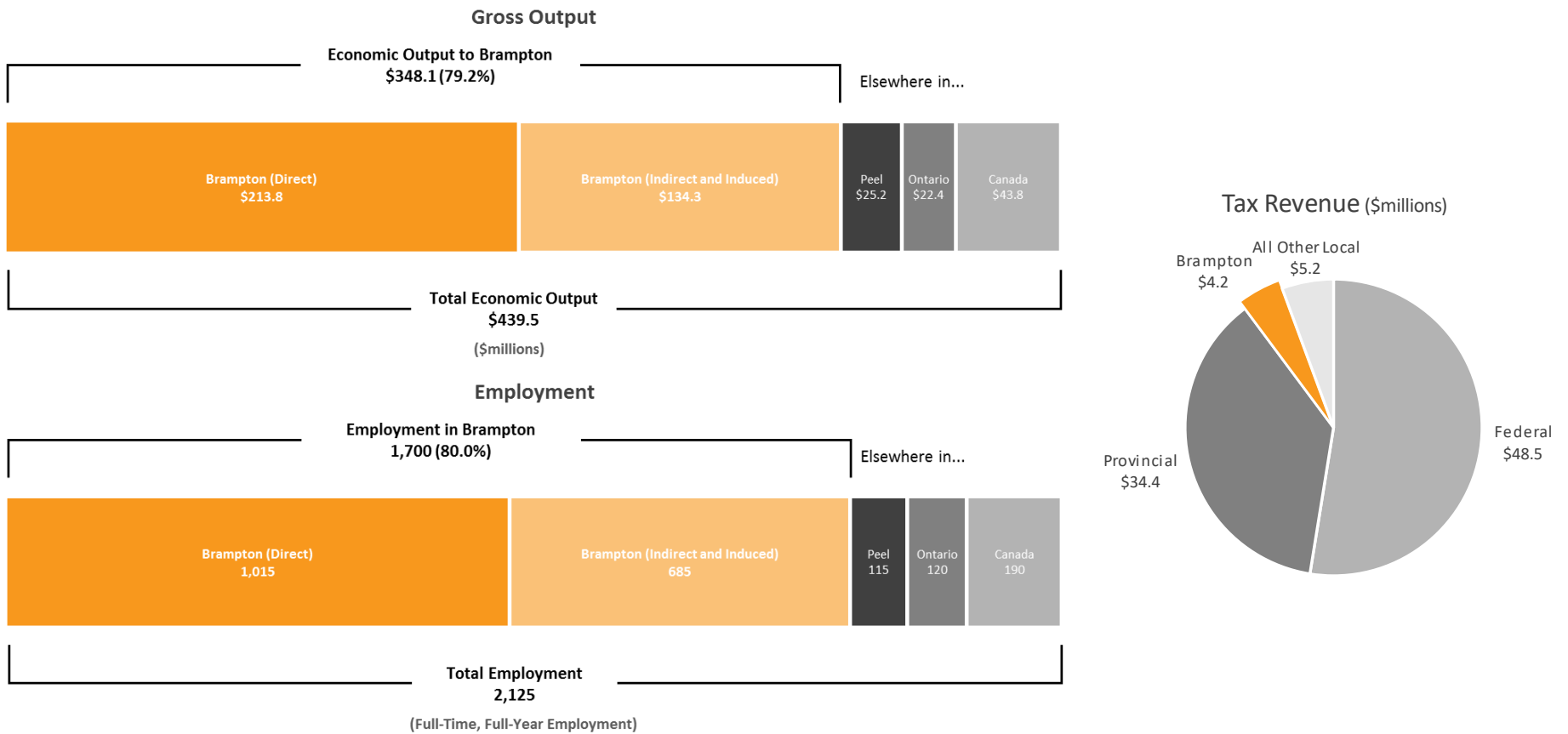
**± \$439.5 million in gross economic output** nation-wide (Figure 2). Overall, approximately 79% of this economic activity is expected to occur in the City of Brampton. The multiplier of 1.62 in the City of Brampton indicates that every \$1 dollar of capital expenditures is expected to generate gross output of \$1.62 in the local economy. The large share of economic activity that is expected to remain within Brampton reflects the well-diversified nature of the local economy.

**± 2,125 full-time years of employment** (including the indirect and induced jobs), of which approximately 80% will be in the City of Brampton (Figure 2). The multiplier of 7.9 in Brampton indicates that every \$1 million invested in the construction of a new university in Brampton will generate 7.9 new jobs with an average wage of \$66,000.

The one-time capital investment in the construction of the university campus will be felt broadly across Brampton’s economy. Based on our estimates, approximately 60% of the employment in Brampton will be in the construction sector. Wholesale and Retail Trade and Professional, Scientific and Technical Services are also expected to experience increased employment related to the construction and design of the new campus. More detailed employment by industry for the City of Brampton are outlined in Appendix B.

**Total one-time government revenue of ± \$92.3 million**, of which ±\$4.2 million will flow to the City of Brampton (Figure 2). These figures include personal and corporate income tax, sales taxes (e.g., PST and GST), property taxes, building permit fees, cash-in-lieu of parkland and other miscellaneous taxes, tariffs and fees.

**Figure 2: Impact of One-Time Construction Expenditures (Downtown University)**



Source: urbanMetrics inc., based on Statistics Canada Input-Output Model.

Note: Rounded to the nearest 5 jobs and \$100,000.

## CENTRE FOR EDUCATION, INNOVATION AND COLLABORATION

In this analysis, we have assumed that the CEIC would be approximately 200,000 square feet (gross area), and include a public learning common, cultural and heritage space (possibly a museum) and public library occupying a combined 170,000 square feet of space, while space for a business incubator occupies the remaining 30,000 square feet.

The one-time impacts associated with the construction of a new CEIC in Downtown Brampton is also expected to have a significant impact on employment, wages and tax revenue in the City.

As shown in Figure 3, the construction of the CEIC is expected to result in a one-time capital investment of approximately **\$114.5 million**.

**Figure 3: Estimated CEIC Construction Costs**



Source: urbanMetrics inc., based on Hanscomb Construction Cost Guide and Altus 2017 Construction Cost Guide.

The initial infrastructure investment and construction costs associated with the development of the new 200,000 square foot CEIC is expected to yield:

**± \$239.3 million in gross economic output** nation-wide (Figure 4).

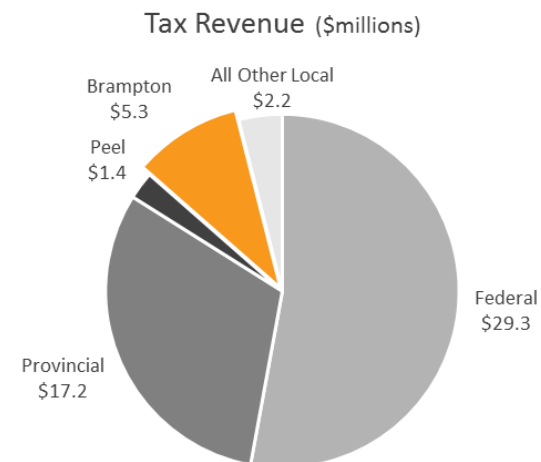
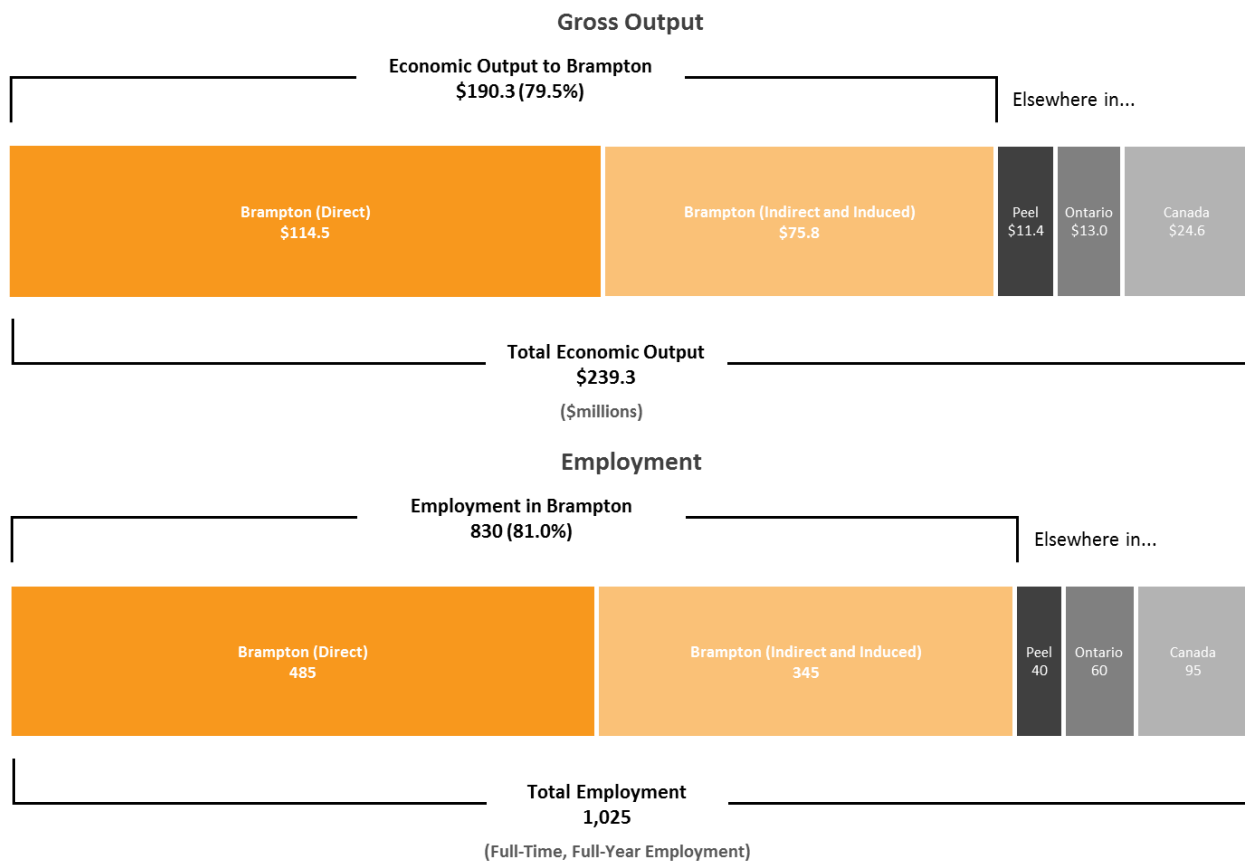
Approximately 79.5% of this economic activity is expected to occur in the City of Brampton. The multiplier of 1.66 in the City of Brampton indicates that every \$1 dollar of capital expenditures is expected to generate gross output of \$1.66 in the local economy. The large share of economic activity that is expected to remain within Brampton reflects the well diversified nature of the local economy.

**± 1,025 full-time years of employment** (including the indirect and induced jobs), of which approximately 81% will be in the City of Brampton (Figure 4). The multiplier of 7.25 in Brampton indicates that every \$1 million invested in the construction of an CEIC in Brampton will generate 7.25 new jobs with an average wage of \$85,200.

The one-time capital investment in the construction of the CEIC will be felt broadly across the Brampton economy. Based on our estimates, approximately 60% of the employment in Brampton will be in the construction sector. Wholesale and Retail Trade and Professional, Scientific and Technical Services are also expected to experience increased employment related to the construction of the facility. Detailed employment by industry for the City of Brampton are outlined in Appendix C.

**Total one-time government revenue of ± \$55.4 million**, of which ± \$6.7 million will flow to local governments including the Region of Peel and City of Brampton (Figure 4). These taxes include personal and corporate income tax, sales taxes (e.g., PST and GST), building permit fees and other miscellaneous taxes, tariffs and fees.

Figure 4: Impact of One-Time Construction Expenditures (CEIC)



Source: urbanMetrics inc., based on Statistics Canada Input-Output Model.  
 Note: Rounded to the nearest 5 jobs and \$100,000.



## COMBINED ONE-TIME BENEFITS FROM CONSTRUCTION

The investment in the CEIC and the establishment of a university campus in Brampton will have significant one-time benefits to the Brampton economy resulting from the total construction expenditures.

Combined, these two facilities are expected to result in the direct expenditure of **\$329.6 million** in the Brampton economy. This expenditure will create jobs, increase labour income and generate additional tax revenue for all levels of government.

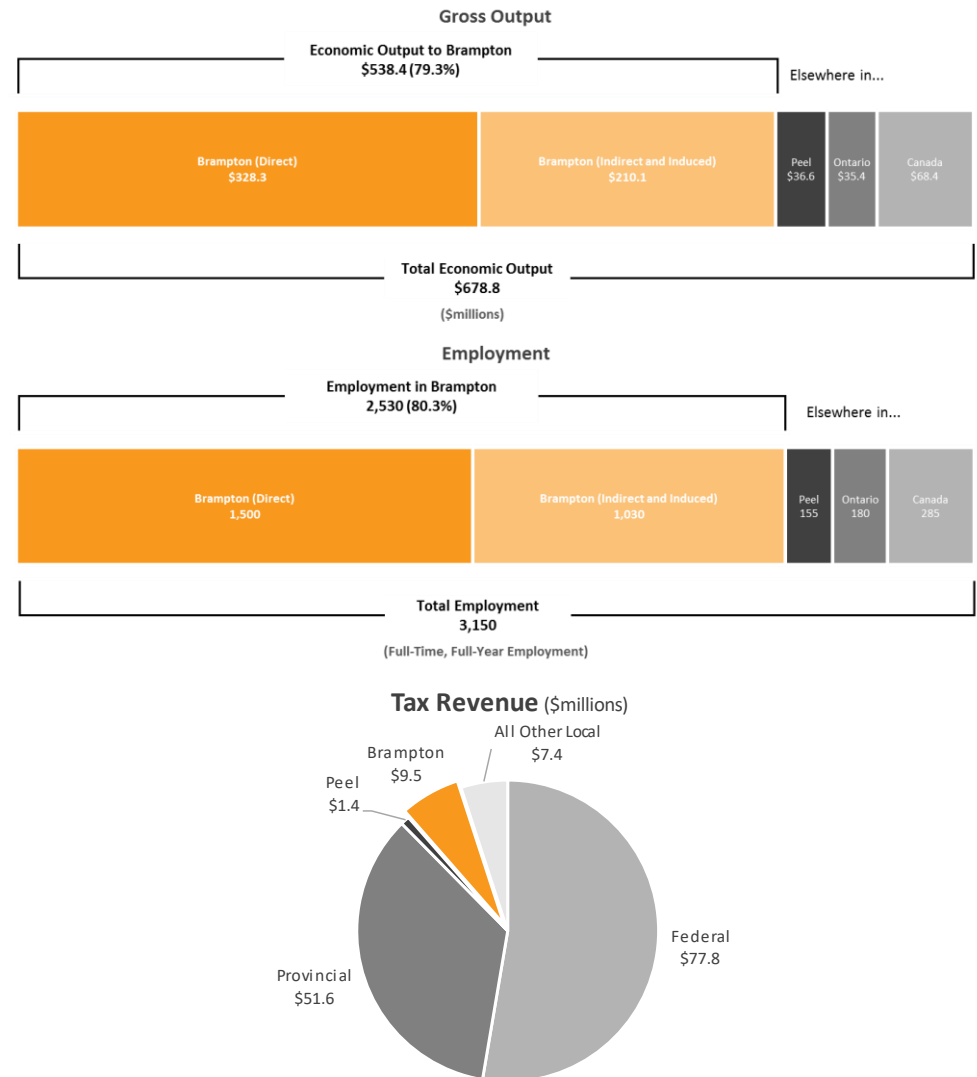
The combined construction costs associated with a 5,000-student university campus (reference case) and the accompanying CEIC would result in the following estimated benefits to the City of Brampton, Region of Peel and Province of Ontario:

**± \$678.8 million in gross economic output** nation-wide. Approximately 79.3% of this economic activity is expected to occur in the City of Brampton.

**± 3,150 full-time years of employment** (including the indirect and induced jobs), of which approximately 80.3% will be in the City of Brampton. These jobs in Brampton will have an average wage of \$72,300.

**Total one-time government revenue of ± \$147.7 million**, of which ±\$10.9 million will flow to local governments including the Region of Peel and City of Brampton.

Figure 5: Combined Impact of One-Time Construction Expenditures



Source: urbanMetrics inc., based on Statistics Canada Input-Output Model.  
 Note: Rounded to the nearest 5 Jobs and \$100,000.

## **3.0 OPERATIONAL IMPACTS (ONGOING)**

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## DOWNTOWN UNIVERSITY

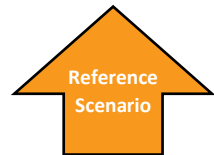
As identified in our 2015 report, *Economic Impact Statement Major University Capacity Expansion*, the ongoing spending associated with the daily operations of a new university campus in Downtown Brampton is expected to have a significant impact on employment, wages and tax revenue in the City.

The operation of a new university campus with 1,000 students is expected to result in ongoing expenditures of approximately \$26.8 million (Figure 6). This is expected to increase to \$134.3 million as the campus grows to an enrolment of 5,000 students and potentially \$268.6 million over the longer-term if 10,000 students are accommodated on the campus.

**Figure 6: Estimated Ongoing Operation Costs (Downtown University)**

	Full-Time Enrolment			
	1,000	5,000	10,000	20,000
Salaries and Benefits	\$16,600,000	\$82,900,000	\$165,700,000	\$331,500,000
Other Operational Expenditures	\$8,900,000	\$44,700,000	\$89,500,000	\$179,000,000
Ongoing Investment Expenditures	\$1,300,000	\$6,700,000	\$13,400,000	\$26,800,000
<b>Total Annual Operating Expenditures</b>	<b>\$26,800,000</b>	<b>\$134,300,000</b>	<b>\$268,600,000</b>	<b>\$537,300,000</b>

Source: urbanMetrics inc.



The ongoing expenditures associated with the operation of the new **5,000 student** university campus (reference case) is expected to yield:

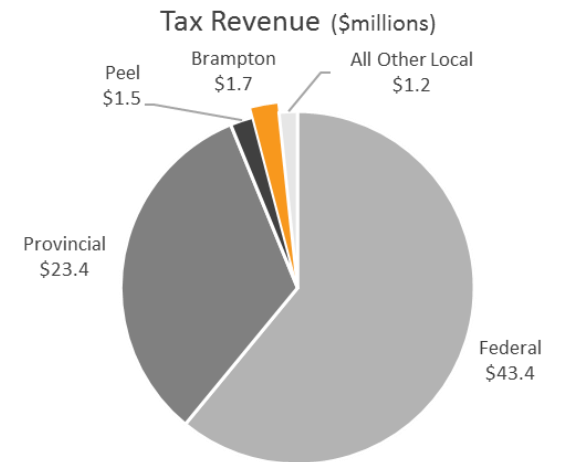
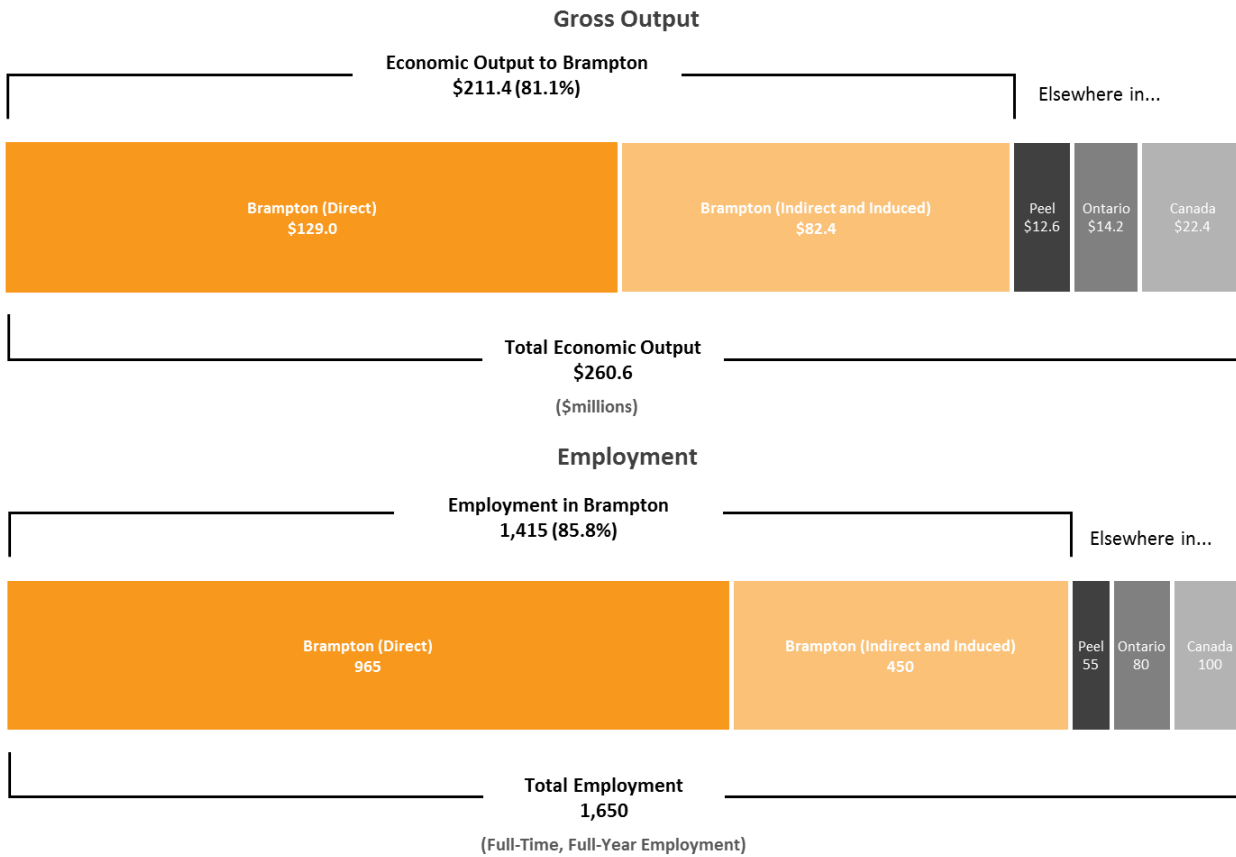
**± \$260.6 million in total gross economic output** to the Canadian economy, the majority of which is expected to occur in Brampton (Figure 7). The multiplier of 1.57 in the City of Brampton indicates that for every \$1 dollar spent on operations each year is expected to generate gross output of \$1.57 in the local economy

**± 1,650 full-time years of employment** (including the indirect and induced jobs), of which approximately 86% will be in the City of Brampton (Figure 7). The multiplier of 10.9 indicates that for every \$1 million spent on ongoing operations in the Brampton economy will generate almost 11 new jobs and an average wage of \$78,400.

The majority of jobs related to the ongoing operations at a new university will be in the educational services and retail/wholesale trade sectors of the economy. These two sectors are expected to account for 3 out of 4 jobs sustained in the economy as a result of the new university campus. Detailed employment by industry for the City of Brampton are outlined in Appendix B.

**Total annual government revenue of ± \$71.2 million**, of which ± \$3.2 million will likely flow to local governments including the Region of Peel and City of Brampton (Figure 7). Taxes accruing to the City of Brampton include heads and beds levy and property tax revenue associated with out-of-town students living off-campus. Taxes in Figure 7 also include personal and corporate income tax, sales taxes (e.g. PST and GST), property taxes and other miscellaneous taxes, tariffs and fees. Our analysis likely underestimates the potential tax revenue accruing to the City, as it does not include increased tax revenue related to new business investment (and reinvestment) that would serve the university.

Figure 7: Impact of Ongoing Operating Expenditures (Downtown University)



Source: urbanMetrics inc., based on Statistics Canada Input-Output Model.  
 Note: Rounded to the nearest 5 jobs and \$100,000.

## CENTRE FOR EDUCATION, INNOVATION AND COLLABORATION

The ongoing, daily operation of the CEIC will also provide a significant economic benefit to the Brampton economy on an ongoing basis through operational expenditures. These operational expenditures include items such as salaries, communications, professional fees, purchase of materials to operate the facilities, etc.

The ongoing spending associated with the daily operations of a new CEIC associated with a university campus in Downtown Brampton is expected to have a significant impact on employment, wages and tax revenue in the City. The operation of an CEIC of 200,000 square feet is expected to result in ongoing expenditures of approximately \$22.3 million (Figure 8). Our estimated operating expenditures are based on the Financial Information Returns for the City of Brampton as it relates to library operations. We have also reviewed the operating budgets for various incubators in Southern Ontario, including Communitech, the Innovation Factory, Innovation Guelph and the RIC Centre in Mississauga to arrive at our estimated annual operating expenditures for a 30,000 square foot incubator space in the CEIC.

**Figure 8: Estimated Ongoing Operation Costs (CEIC)**



Source: urbanMetrics inc., based on Hanscomb 2014 Construction Cost Guide and Altus 2017 Construction Cost Guide.

The ongoing expenditures associated with the operation of the new 200,000 square foot CEIC is expected to yield:

**± \$47.6 million in total gross economic output** to the Canadian economy, the majority of which is expected to occur in Brampton (Figure 9). The multiplier of 1.69 in the City of Brampton indicates that for every \$1 dollar spent on ongoing operations is expected to generate gross output of \$1.69 in the local economy.

**± 275 full-time years of employment** (including the indirect and induced jobs), of which approximately 85.5% will be in the City of Brampton (Figure 9). The multiplier of 10.5 indicates that for every \$1 million spent on ongoing operations in the Brampton economy will generate almost 11 new jobs and an average wage of \$76,600.

The majority of jobs related to the ongoing operations at a new CEIC will be in the public administration sector of the economy. This sector is expected to account for 3 out of 4 jobs sustained in the economy as a result of the new CEIC. Detailed employment by industry for the City of Brampton are outlined in Appendix C.

**Total annual government revenue of ± \$11.7 million**, of which ± \$0.6 million will likely flow to local governments including the Region of Peel and City of Brampton (Figure 9). These taxes include personal and corporate income tax, sales taxes (e.g. PST and GST), property taxes and other miscellaneous taxes, tariffs and fees.

Figure 9: Impact of Ongoing Operating Expenditures (CEIC)



Source: urbanMetrics inc., based on Statistics Canada Input-Output Model.  
Note: Rounded to the nearest 5 jobs and \$100,000.

## COMBINED ONGOING BENEFITS FROM OPERATIONS

The ongoing operations at a university campus with 5,000 students and the CEIC will generate significant ongoing benefits for the City of Brampton and Peel Region. These benefits include increased gross economic output, ongoing employment and increased tax revenue for all levels of government. The operation of these two facilities is expected to result in:

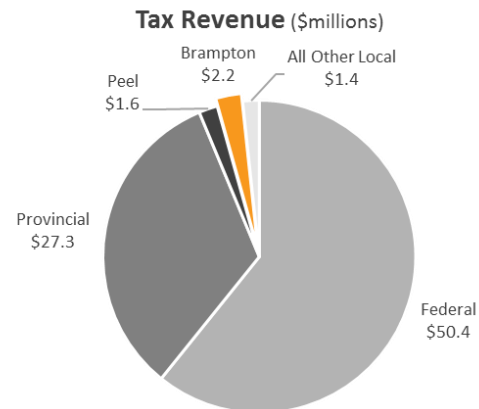
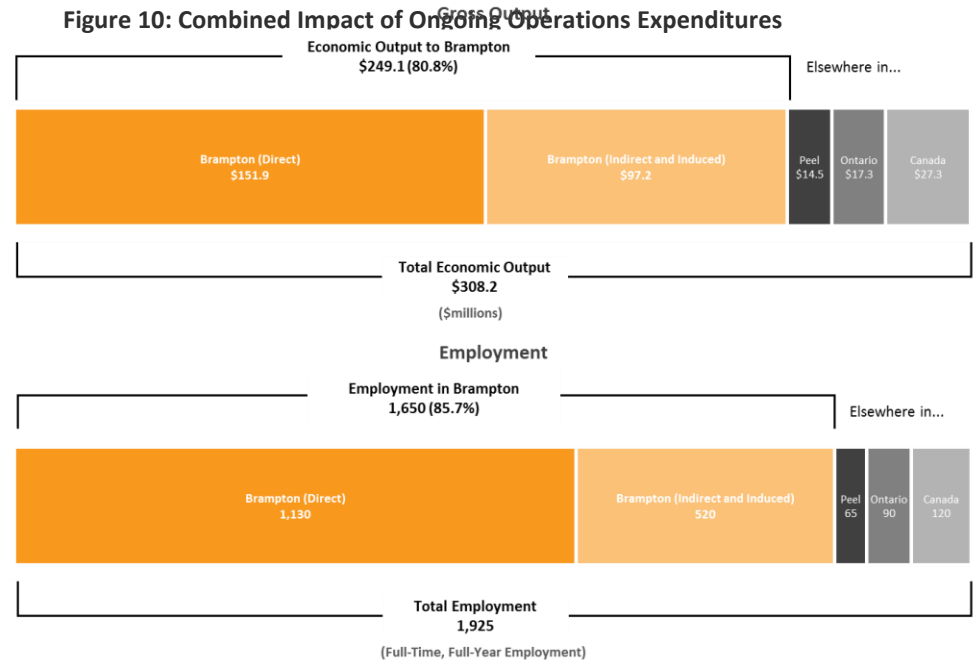
± **\$308.2 million in gross economic output** nation-wide. Approximately 80.8% of this economic activity is expected to occur in the City of Brampton.

± **1,925 full-time years of employment** (including the indirect and induced jobs), of which approximately 85.7% will be in the City of Brampton. These jobs in Brampton will have an average wage of \$78,100.

**Total annual government revenue of ± \$82.9 million**, of which ± \$3.8 million will flow to local governments including the Region of Peel and City of Brampton.

It is important to note that this analysis only considers the economic impact related to operational expenditures on items such as salaries, utilities, communications, marketing, etc. for the university campus and CEIC. Later in this report we will estimate the ongoing economic impact associated with student and visitor spending in Brampton, as well as research expenditures, business start-ups and increased earning potential and their associated employment benefits.

Figure 10: Combined Impact of Ongoing Operations Expenditures



Source: urbanMetrics inc., based on Statistics Canada Input-Output Model.  
 Note: Rounded to the nearest 5 Jobs and \$100,000.

## **4.0 Student & Visitor Spending Impacts (Ongoing)**

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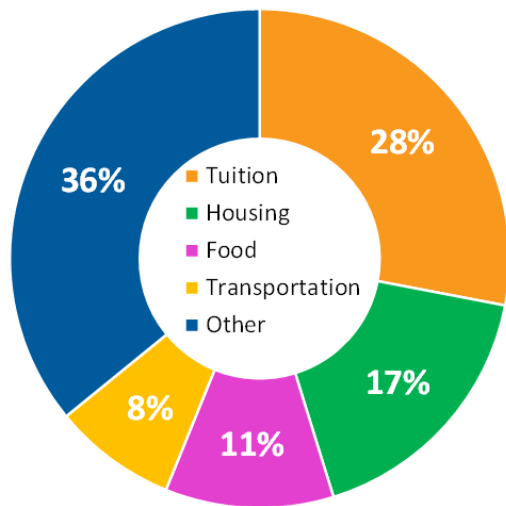


## DOWNTOWN UNIVERSITY

The ongoing impact associated with student and visitor spending is expected to have a net positive impact on employment in the City.

Based on our review, we have estimated annual spending by out-of-town students living off-campus at approximately \$11,400 per student.<sup>2</sup> These expenditures are broken down in Figure 11.

**Figure 11: Breakdown of Annual Student Expenditures**



Source: urbanMetrics inc., based on our review Economic Impact statements prepared for other of Ontario universities and the student budgeting section for various universities.

We have also estimated expenditures made off-campus by students living in an on-campus residence. These expenditures have been estimated at \$2,520

<sup>2</sup> Estimate based on various sources, including Economic Impact statements prepared for other post-secondary institutions and the student budgeting section of websites for various universities.

per student per year and includes items such as food (purchased off-campus), transportation, entertainment and personal care items.

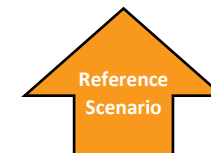
In addition to student spending, we have also estimated visitor spending associated with a university in the City of Brampton. Types of visits generated by universities include students visiting a university campus when trying to decide a university to attend, business visitors, event goers, conference attendees, alumni, and casual visitors. Overall, we have assumed an average of 5 visits per student, which is based on interviews we have conducted on similar assignments for other Ontario universities.

As shown in Figure 12, the initial phase of a new university campus with 1,000 students is expected to result in approximately \$3.0 million in annual student and visitor spending. This is expected to increase to \$14.7 million as the campus grows to a student enrolment of 5,000 students and potentially \$29.6 million over the longer-term if 10,000 students are accommodated on the campus.

**Figure 12: Estimated Student and Visitor Spending**

	Full-Time Enrolment			
	1,000	5,000	10,000	20,000
<b>Out-of-Town Student Spending</b>				
Students Living On-Campus (residence)	\$300,000	\$1,500,000	\$2,900,000	\$5,700,000
Students Living Off-Campus	\$1,900,000	\$9,400,000	\$19,000,000	\$37,900,000
<b>Total Out-of-Town Student Spending</b>	<b>\$2,200,000</b>	<b>\$10,900,000</b>	<b>\$21,900,000</b>	<b>\$43,600,000</b>
<b>Visitor Spending</b>	<b>\$800,000</b>	<b>\$3,800,000</b>	<b>\$7,700,000</b>	<b>\$15,400,000</b>
<b>Total Student and Visitor Spending</b>	<b>\$3,000,000</b>	<b>\$14,700,000</b>	<b>\$29,600,000</b>	<b>\$59,000,000</b>

Source: urbanMetrics inc.



The student and visitor expenditures associated with a new **5,000 student** university campus is expected to yield:

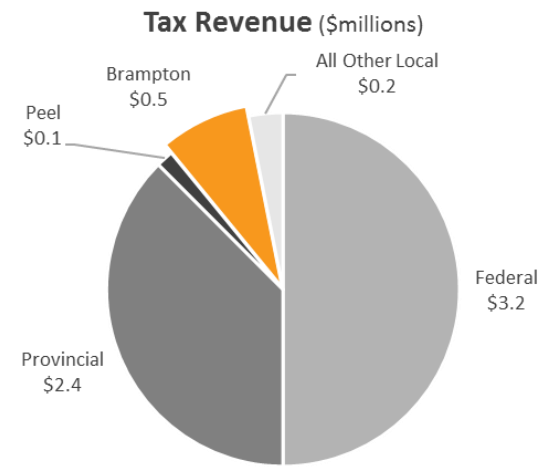
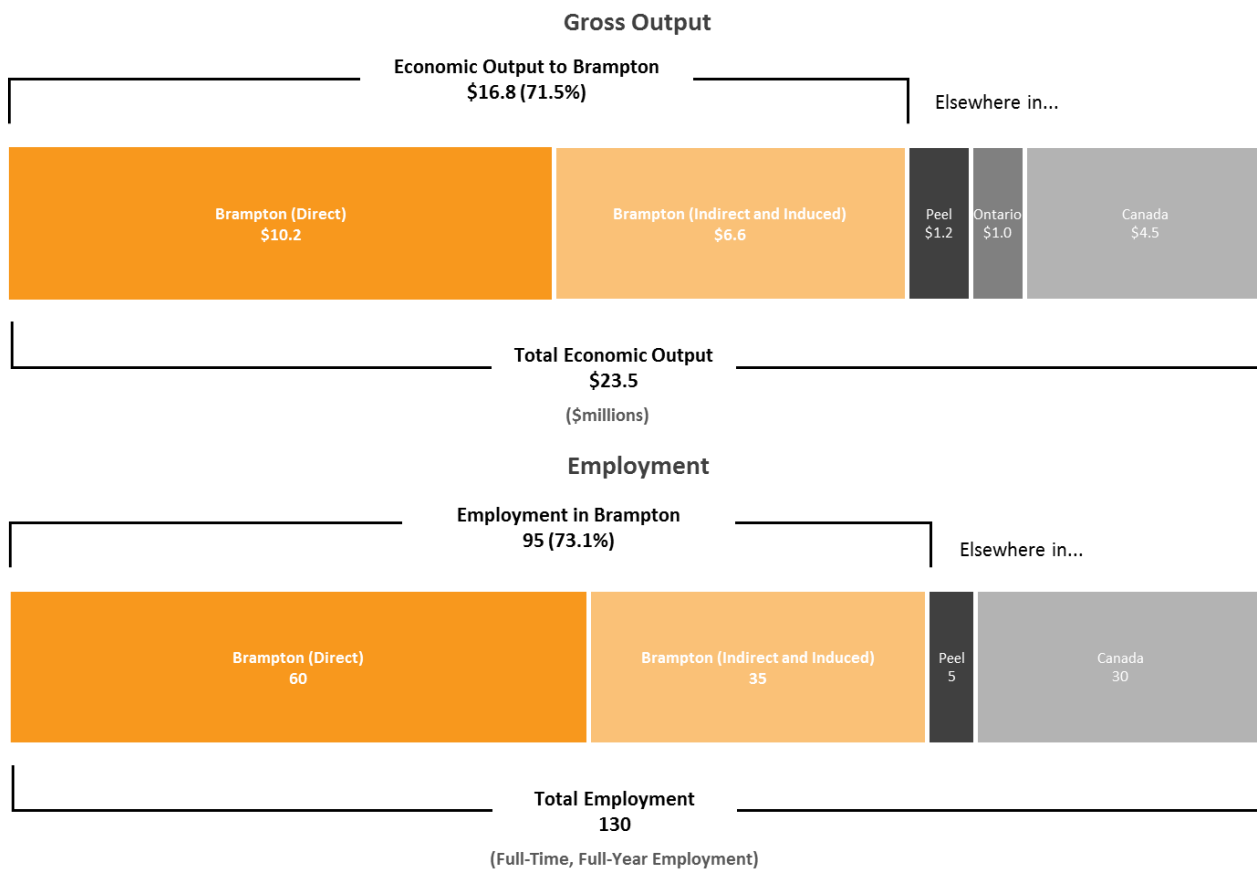
**± \$23.5 million in total gross economic output to the Canadian economy**, 71.5% of which is expected to occur in Brampton (Figure 13). The multiplier of 1.15 in the City of Brampton indicates that for every \$1 dollar spent on ongoing operations is expected to generate gross output of \$1.15 in the local economy. This multiplier is lower than the multiplier for capital expenditures and ongoing operations, as many of the consumer goods that are consumed by students and visitors are purchased in the City and not produced in Brampton.

**± 130 full-time years of employment** (including the indirect and induced jobs), of which approximately 73.1% will be in the City of Brampton (Figure 13). The multiplier of 6.7 indicates that for every \$1 million spent by students and visitors will generate almost 7 new jobs in Brampton and an average wage of \$58,900.

The majority of jobs related to student and visitor spending will be in retail/wholesale trade and transportation, specifically urban transportation. These two sectors are expected to account for half of the new jobs supported in the community. Detailed employment by industry for the City of Brampton are outlined in Appendix B.

**Total annual government revenue of ± \$6.4 million**, of which ± \$0.6 million will likely accrue to local governments including the Region of Peel and City of Brampton (Figure 13).

**Figure 13: Impact of Student and Visitor Expenditures (Downtown University)**



Source: urbanMetrics inc., based on Statistics Canada Input-Output Model.  
 Note: Rounded to the nearest 5 jobs and \$100,000.

## CENTRE FOR EDUCATION, INNOVATION AND COLLABORATION

The proposed CEIC is also expected to stimulate local visitor spending in the Brampton economy. For example, when the Seattle Central Library opened its doors, more than 2.3 million people are estimated to have visited the facility in its first year, including as many as 700,000 out-of-town visitors<sup>3</sup>.

Based on our review of the Brampton Library Master Plan, libraries in Brampton average 11.3 annual visits per square foot. Therefore, based on our understanding of the CEIC (as proposed), the City could expect annual visitation **somewhere in the order of 2.3 million visits**, or about 6,200 visits per day. This excludes students attending the new university campus. As these expenditures are already captured in the previous analysis.

Further research for comparable new library facilities indicates that some 30% of visitors annually to the CEIC could be from out-of-town. Furthermore, we estimate that approximately **27% or 189,000 of these visitors annually will identify the CEIC as the primary reason for the visit.**

It is also important to note that some people using the new CEIC that would have otherwise used an existing library facility in Brampton, and therefore, would not generate a visitor spending impact, as these people would have spent their income elsewhere in Brampton. As such, these visits have been excluded from our analysis. However, it is important to note that Brampton residents who visit the CEIC and spend money in Downtown Brampton will ultimately help local businesses in the downtown and help bolster the vibrancy and economic success of the area.

Data from Regional Tourism Organization (RTO), which includes the City of Brampton, identifies that same day visitors in the area spend \$97 per visit, in

<sup>3</sup> The Seattle Public Library Central Library: Economic Benefits Assessment; Berk & Associates, July 2005.

2017 dollars. This includes expenditures on items such as food, transportation, entertainment, clothing and personal care products. As shown in Figure 14, the CEIC is expected to result in approximately **\$18.3 million in annual visitor spending.**

**Figure 14: Visitor Spending (CEIC)**



Source: urbanMetrics inc.

The visitor expenditures associated with a new 200,000 square foot CEIC is expected to yield:

**± \$30 million in total gross economic output to the Canadian economy**, 68.3% of which is expected to occur in Brampton (Figure 15). The multiplier of 1.11 in the City of Brampton indicates that for every \$1 dollar spent on ongoing operations is expected to generate gross output of \$1.11 in the local economy. This multiplier is lower than the multiplier for capital expenditures and ongoing operations, as many of the consumer goods that are consumed by visitors are purchased in the City and not produced in Brampton.

**± 180 full-time years of employment** (including the indirect and induced jobs), of which approximately 72.2% will be in the City of Brampton (Figure 15). The multiplier of 7.1 indicates that for every \$1 million spent by students and visitors will generate 7 new jobs in Brampton and an average wage of \$60,800.

The majority of jobs related to visitor spending will be in transportation, specifically urban transportation, and food services. These two sectors are expected to account nearly three quarters of the new jobs supported in the community. Detailed employment by industry for the City of Brampton are outlined in Appendix C.

**Total annual government revenue of ± \$8.5 million**, of which ±\$ 0.4 million will likely accrue to local governments including the Region of Peel and City of Brampton (Figure 15).

Figure 15: Impact of Visitor Expenditures (CEIC)



Source: urbanMetrics inc., based on Statistics Canada Input-Output Model.

Note: Rounded to the nearest 5 jobs and \$100,000.

## COMBINED STUDENT & VISITOR SPENDING

Student and visitor spending associated with a 5,000-student university campus and CEIC will have transformative effects on Downtown Brampton. Much of the spending identified in this section of the report will flow directly to local businesses located in the downtown. As new businesses open to serve this growing base, it will reduce the amount of existing vacant space in Downtown Brampton and contribute towards the development of new space. This will in turn, create jobs at local businesses and contribute towards the vibrancy of the downtown. These are benefits identified in economic impact studies for libraries in other municipalities, where the establishment of a new library in the downtown is cited for increasing the livability and vibrancy of the downtown.

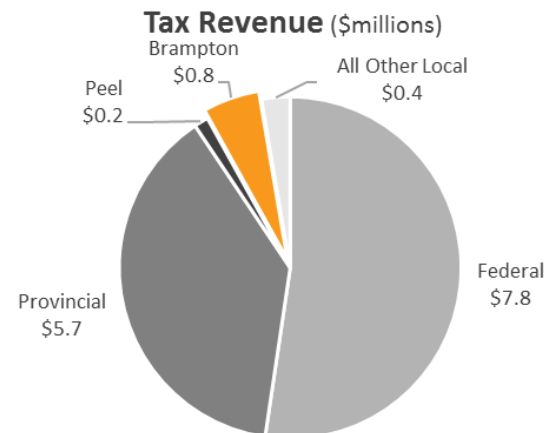
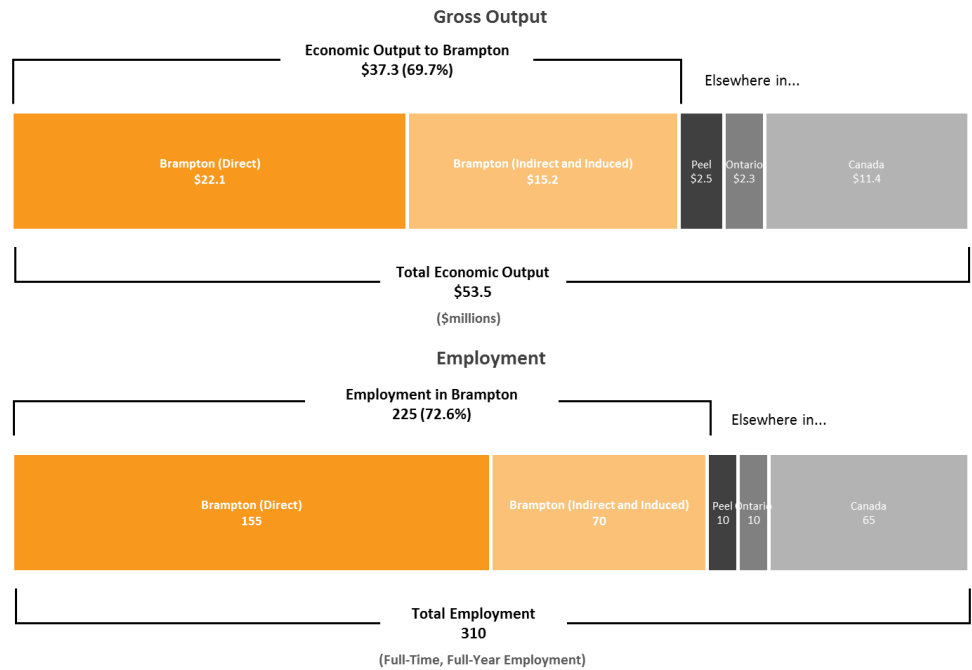
The combined student and visitor spending associated with a 5,000-student university campus and the new visitor spending associated with the CEIC will result in the following benefits to the City of Brampton, Region of Peel and Province of Ontario:

**± \$53.5 million in gross economic output** nation-wide. Approximately 69.7% of this economic activity is expected to occur in the City of Brampton.

**± 310 full-time years of employment** (including the indirect and induced jobs), of which approximately 72.6% will be in the City of Brampton. These jobs in Brampton will have an average wage of \$60,000.

**Total annual government revenue of ± \$14.9 million**, of which ± \$1.0 million will likely accrue to local governments including the Region of Peel and City of Brampton.

Figure 16: Combined Impact of Ongoing Student and Visitor Expenditures



Source: urbanMetrics inc., based on Statistics Canada Input-Output Model.  
 Note: Rounded to the nearest 5 Jobs and \$100,000.

## **5.0 Capitalizing on a New University and Centre for Education, Innovation and Collaboration**

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Establishing a new university campus in the City of Brampton provides an opportunity to deliver post-secondary education in a community that is clearly underserved in terms of current and future student need.

A new university campus in Brampton will provide Brampton residents with an opportunity to pursue a post-secondary education closer to home, thereby making post-secondary education more affordable.

Based on *Investing in Their Future: a Survey of Student and Parental Support for Learning (2006)* accommodations and food represent 28% of student expenditures on post-secondary education, a share which is equal to expenditures on tuition. Reducing or eliminating these accommodation and food costs by providing students with an opportunity to live at home while attending university can open access to a university education for segments of the population where it was previously not affordable. A university campus in Brampton would also make part-time enrolment a more practical option for those already in the workforce or with family commitments.

The MAESD has made a commitment to expanding undergraduate capacity at Ontario’s universities. Addressing affordability and sustainability for students and maximizing the cost effectiveness of the Provincial investment are identified as a key government priority in expanding university capacity. The City of Brampton is an ideal location for a university campus as it clearly achieves both of these priorities.

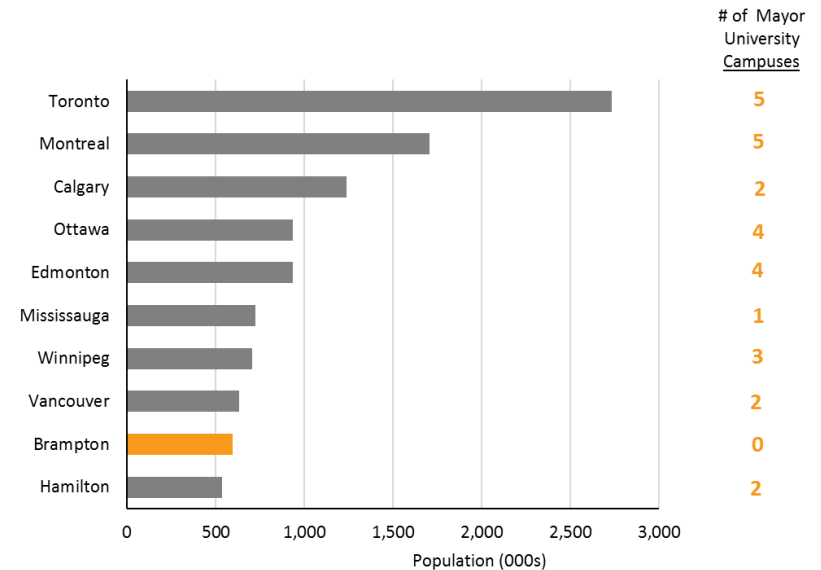
The City of Brampton also has a well-diversified economy. This economy is expected to draw newcomers and new business opportunities, leading to increased demand for highly skilled workers. Brampton, with a population of approximately 594,000 persons, is the 9th largest municipality in Canada, yet it is the only municipality among the top 10 that does not have a university campus.

There are a variety of socio-economic variables that determine future demand for a university education. Some of these variables include population in the 18 to 24 age cohort, family income levels, distance from a university campus

and parental education. Examining these variables in Brampton indicates a strong demand for university education both now and in the future.

Brampton also has the transportation connections in place to support a university campus. Brampton is served by both Brampton Transit and GO Transit, which link Brampton with the City of Toronto and surrounding municipalities. In addition to a significant public transit network, the City of Brampton is also served by five 400-series highways, including the 401, 403, 407, 410 and 427.

**Figure 17: Largest Municipalities in Canada and Number of Major University Campuses**



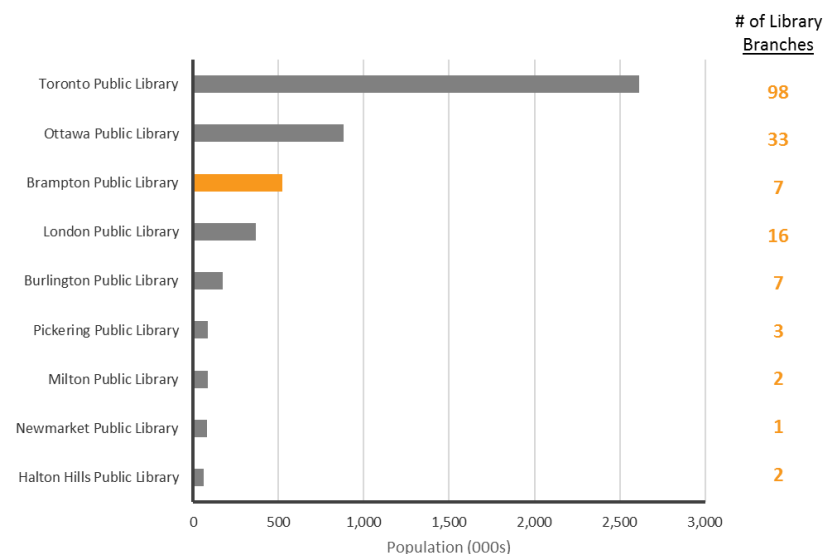
Source: urbanMetrics inc. based on 2016 Census of Canada

According to a recent publication by the Aspen Institute entitled *Rising to the Challenge: Re-envisioning Public Libraries* (2014), the library of the future will remain a destination for many users, serving many purposes – personal quiet

time for reading, research or homework; supervised afterschool activities; public events and performances; innovation labs; hacker and maker spaces; co-working and collaboration spaces. As part of our work to date, we have reviewed the CEIC proposal in the context of other jurisdictions that have made bold investments in transformative community anchors. The five projects in Figure 18 have been identified as *guideposts* for the 21<sup>st</sup> century library.

Furthermore, Figure 19 identifies library systems across Ontario that have made significant investments in recent years, based on research by Kimberly Silks (2017). As illustrated, the City of Brampton has nearly half the number of library branches than London, despite containing some 42% more residents. The City of Burlington contains the same number of branches as Brampton, despite containing one-third the population. On a per capita basis, both library systems contain more library space per resident than Brampton, at some approximately 0.9 square feet per resident and 0.6 square feet per resident, respectively. In contrast, the City of Brampton contained only 0.4 square feet per resident, a service level which has almost certainly gone down when population growth from 2011 – 2016 is factored in.

Figure 19: GTHA Municipalities with Recent Library Investment



Source: urbanMetrics inc., based on Silks, K (2017), *Creating a Culture of Evaluations, Library Impact Studies*

Figure 18: Collaborative Hubs – Best Practices

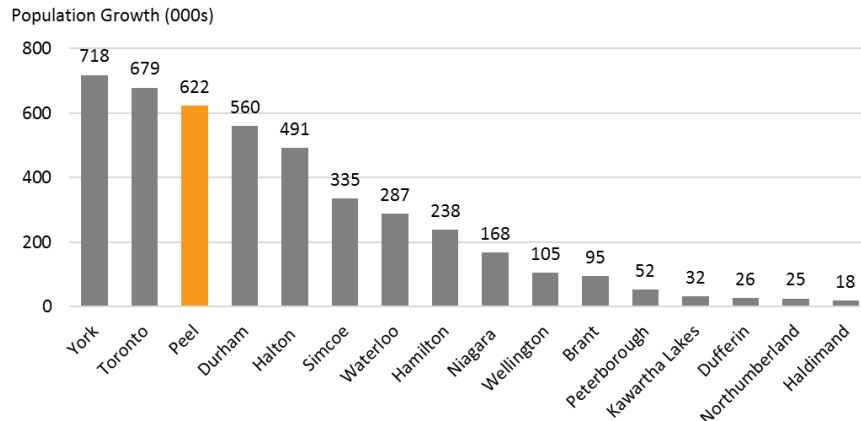
	Dokk1	Calgary Central Library	Ryerson Student Learning Centre	Halifax Central Library	Geelong Library & Heritage Centre
LOCATION	Aarhus, DK	Calgary, CAN	Toronto, CAN	Halifax, CAN	Geelong, AUS
MARKET POP.	415,000	1,300,000	40,000	415,000	235,000
OPENED	2015	opening 2018	2015	2012	2015
COST (CDN\$)*	\$415,000,000	\$245,000,000	\$120,000,000	\$58,000,000	\$45,000,000
SIZE (SF)	300,000	235,000	156,000	110,000	65,000
FLOORS	4	5	7	5	5
PARKING (SP.)	1000	none	none	107	none

\*May include land acquisition costs.

## POPULATION GROWTH

Peel Region is forecast to have one of the fastest growing populations in the Province of Ontario over the 2011 to 2041 period. Over the 30-year period, Peel Region is expected to accommodate 622,000 new residents and account for 14% of population growth in the Greater Golden Horseshoe. The City of Brampton is forecast to account for 56% of population growth over the 2011-2041 period in Peel Region<sup>4</sup>.

**Figure 20: Population Growth 2011-2041, Greater Golden Horseshoe Municipalities**

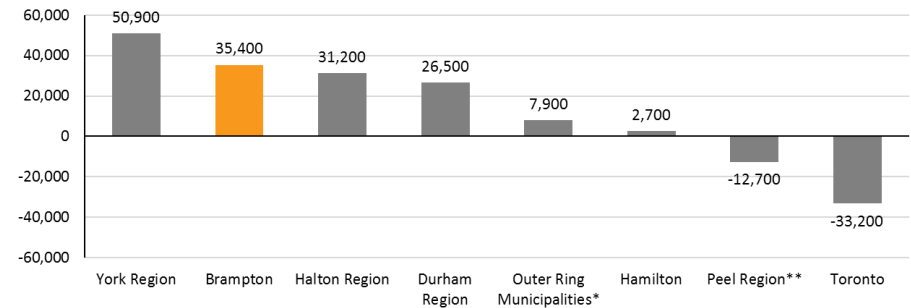


Source: urbanMetrics inc. based on Greater Golden Horseshoe Growth Forecasts to 2041, Technical Report, November 2012

## POPULATION AGE 18 TO 24

One of the most important factors in forecasting demand for post-secondary education is the population in the 18 to 24-age cohort. The strong population growth that Brampton has experienced in recent years is expected to significantly increase the number of people in this age cohort. Between 2011 and 2021, the population age 18 to 24 is expected to grow by approximately 35,400 persons in the City of Brampton (Figure 21). This represents one of the largest increases for a municipality in the Greater Golden Horseshoe.

**Figure 21: Population Growth in the 18 to 24 Age Cohort, Greater Golden Horseshoe Municipalities**



\* Includes municipalities in the Greater Golden Horseshoe outside the the GTHA.

\*\* Excludes the City of Brampton

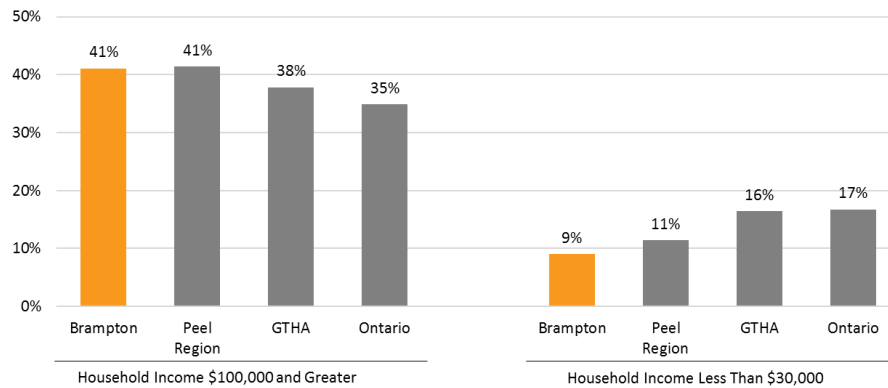
Source: urbanMetrics inc. based on data from Greater Golden Horseshoe Growth Forecasts to 2041, Technical Report November 2012, prepared by Hemson Consulting Ltd.

<sup>4</sup> Greater Golden Horseshoe Growth Forecasts to 2041, Technical Report, Hemson Consulting Ltd., November 2012.

## HOUSEHOLD INCOME

Household income is also an important factor impacting participation rates. Households reporting annual household income greater than \$100,000 had university participation rates that were 31% higher than households with an annual income under \$25,000. Based on The Price of Knowledge, Access and Student Finances in Canada<sup>5</sup>, close to three-quarters of individuals from families with income greater than \$100,000 participated in post-secondary studies. This compared to only 50% for families with income less than \$25,000. As shown in Figure 22 below, the relatively high share of households with an income \$100,000 and greater and lower share of households with an income below \$30,000 is expected to result in higher university participation rates in Brampton in future years relative to the Greater Toronto Hamilton Area (GTHA) overall<sup>6</sup>.

**Figure 22: Percent of Households with Income \$100,000 and Greater and Less than \$30,000 (2015 Dollars)**



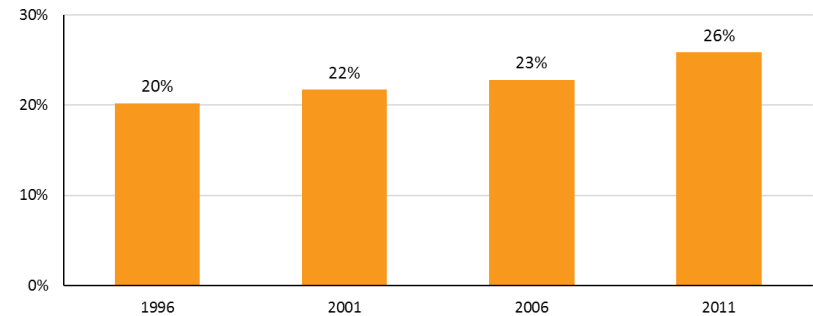
Source: urbanMetrics inc. based on Statistics Canada 2016 Census

<sup>5</sup> The Price of Knowledge, Access and Student Finance in Canada, Fourth Edition, Edited by Joseph Berger, Anne Motte and Andre Parkin

## PARENTAL EDUCATION

The Price of Knowledge, Access and Student Finances in Canada also states that “among 18 to 24-year-olds whose parents completed a university education, about 80 percent consistently enrol in post-secondary studies”. As shown in Figure 23, almost 26% of Brampton residents aged 15 and over had a university certificate, diploma or degree. This is up from 20% at the time of the 1996 Census of Canada and outpaced the increase in the province overall where rates grew from 24% to 28%. The growing share of Brampton residents with a university education is expected to increase university participation rates in the City in future years.

**Figure 23: City of Brampton Share of Population Aged 15 and Over with a University Certificate, Diploma or Degree**



Note: Based on share of population age 15 years and over, except for 2001 data, which is based on population age 20 and over.

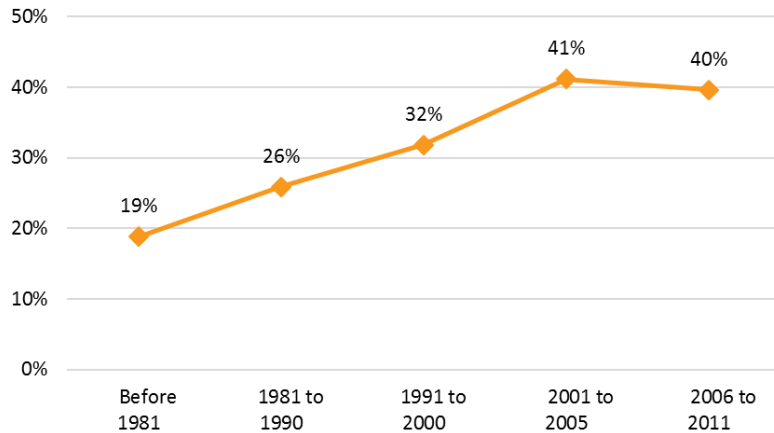
Source: urbanMetrics inc. based on Census of Canada and National Household Survey

<sup>6</sup> Statistics Canada only reports household income for the \$30,000 and lower income group.

## IMMIGRATION

The City of Brampton is attracting a sizable share of the foreign-born residents to Canada, a large portion of which have a university education. Data from the Statistics Canada 2011 National Household Survey indicate that approximately 40% of immigrants to Ontario since 2001 had a university education. This is significantly higher than immigrants who arrived prior to 2001. With a sizable share of these immigrants settling in Brampton, the number of residents with a university education is anticipated to increase. As the share of Brampton residents with a university education increases, it will increase demand for university education in the municipality.

**Figure 24: Share of Immigrants with a University Education by Period of Immigration, Ontario**



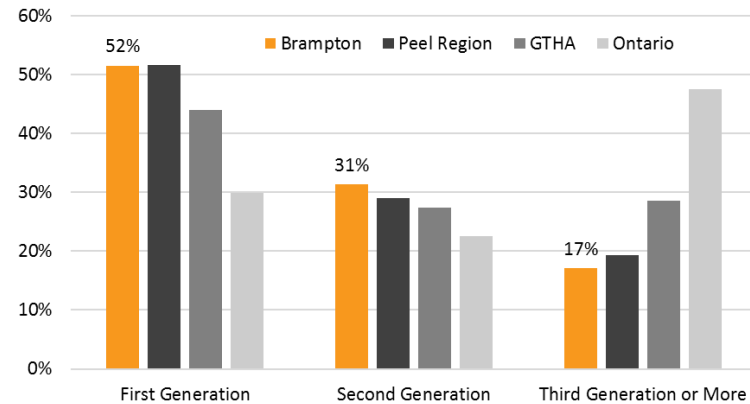
Source: urbanMetrics inc., based on Statistics Canada 2011 National Household Survey

## GENERATION STATUS

The generation status of individuals is also a predictor of university participation rates. Based on *Access to Post-Secondary Education in Canada Among First and Second Generation Immigrants: Raw Differences and Some Underlying Factors* (2008), first and second generation Canadians are much more likely to participate in a university education than Canadians who are third generation or higher. According to the study, university participation rates for first and second generation Canadians were 57% and 54%, respectively, compared to only 38% for Canadians who are third generation or higher.

As shown in Figure 25, the City of Brampton has a higher share of its population identifying as first and second generation Canadians compared to the GTHA and Province of Ontario. This relatively higher share of first and second generation Canadians is expected to increase university participation rates going forward.

**Figure 25: Population by Generation Status**



Source: urbanMetrics inc. based on Statistics Canada 2011 National Household Survey

## EMPLOYMENT GROWTH

In addition to being one of the fastest growing municipalities in the GTHA in terms of population, the City of Brampton also accounted for 14,220 new jobs between 2006 and 2011, which was the third largest increase in employment among GTHA municipalities, following Toronto and Mississauga.

Brampton also has a well-diversified economy that includes a concentration of companies in the knowledge-based sectors. Many of these sectors could be enhanced by the presence of a university in the City. There are numerous studies that connect the importance of universities in driving today's knowledge-based economy. These benefits include collaborations with private sector partners, and providing local businesses with a larger pool of skilled labour than is currently available.

## SOCIAL, CULTURAL AND ECONOMIC IMPACTS OF UNIVERSITIES

As part of previous research into the economic impacts of university campuses on their communities, urbanMetrics conducted extensive interview programmes with community, business and institutional leaders in Waterloo, Ottawa, Hamilton and Winnipeg. These interviews provided a very detailed understanding of the complex and important relationship between Universities and their communities. While the exact nature of impacts related to Brampton will vary depending on the programs offered, the following provides a summary of key benefits uncovered through this research:

- Intellectual property developed at universities results in significant opportunities for business spin-offs and commercialization within the local community. These benefits extend beyond those that can be captured by analyzing university operations alone. Over half of spin-off businesses would not exist but for the relationship with the university.

- Significant technology transfer occurs through linkages between the universities and the community, including: direct partnership ventures, co-op student and graduate placements. This technology transfer directly benefits local business competitiveness. Undergraduate and graduate programs offered by the universities equip graduates with the necessary tools required to generate new ideas that help firms in all sectors become more efficient and productive, through the introduction of new products and processes.
- Universities serve to broaden the cultural base of the community, both through direct activities (e.g., concerts, performances, lectures, athletic events, etc.) and by developing and fostering creativity. Universities with strong arts programs are an important source of creative talent within their communities (e.g., artists, actors, performers, writers, designers, etc.).
- Universities, through their involvement in the international academic community enhance the stature of the host communities.
- Universities develop unique and accessible urban spaces and green spaces that enhance the urban environment and offer both passive and active recreational amenities to the community.
- Universities also play a key role in terms of establishing, sustaining and expanding industry clusters within their regions.
- Universities play a role in generating tourism within a community, through special events, connections to the global community, the availability of meeting venues, and through the provision of summer accommodations.

Universities are not only key to enhancing the quality of businesses within a community, but also in terms of training future policy makers at all levels of government.

## GAMECHANGERS

The City of Brampton has identified six interconnected game changers in their 2016 – 2018 Strategic Plan. The collective impact of these game changers will have an exponential impact on the future of Brampton. One of these gamechangers is the University, which on its own is expected to stimulate an innovation hub that will create jobs, spur innovation and transform the vitality of the economy. The remaining gamechangers and their connection to the university are detailed herein.



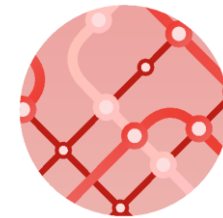
### Planning Vision



The Planning Vision gamechangers will create a vision for Brampton to 2040 that aligns with the City’s strategic plan for Smart Growth. This overall plan for the City will include community engagement and will result in a regulatory framework to implement the vision strategies, as well as an advocacy strategy that will build partnerships and leverage funding opportunities.

All other gamechangers, including the university, feed into the Planning Vision gamechanger. The university, and CEIC, will be a major contributor in achieving the initiatives in the Planning Vision, including fostering diversity in the community and building strong partnerships. The construction and operation of the new university and CEIC will also create jobs in the municipality, which will contribute towards an improved live-work ratio. Increasing the number of jobs available in Brampton will be important in ensuring the Brampton residents have an opportunity to live, work and play in the municipality.

### Regional Connections



The Regional Connections gamechanger will build on the strength of existing local and regional networks and expand on opportunities for development through the seamless integration of local and regional multi-modal transportation networks that connect Brampton with the Greater Toronto and Hamilton Area (GTHA). As a result of

this gamechanger, residents will have an increased choice of mode and enhanced mobility within the City, and the GTHA. This also helps to support intensification and redevelopment in the Urban Centres, another one of the City’s gamechangers.

Enhanced transit connections resulting from this gamechanger, such as the two-way, all day Regional Express Rail (RER) GO Transit rail service, will contribute directly to the success of the University gamechanger. The

strengthening of both regional and local transit in the City will allow future students and CEIC patrons to access these facilities more efficiently and cost effectively. These enhancements will serve to attract future students and CEIC patrons from across the City, Peel Region and the GTHA. Furthermore, the planning of mobility hubs under this gamechanger will serve to unlock transit oriented, mixed-use development opportunities that are important keys to a success university and community facility in Downtown Brampton.

### Health Partnerships



The Health Partnerships gamechanger seeks to build relations among health providers, and grow health and science investments. In the long term, this gamechanger will establish Brampton as a leader in health and life sciences.

The proposed science, technology, engineering, arts and mathematics (STEAM) programming at the university will provide health and sciences businesses in the City and the Region with a well qualified future work force. Furthermore, the potential for strategic partnerships between these companies and the university will serve to help attract future investment in the university.

### Riverwalk



The revitalization of Etobicoke Creek under the Riverwalk gamechanger will not only enhance the natural environment by increasing the parkland available for residents to enjoy, but will also serve to mitigate long standing floodplain risks associated with a regulatory storm. This will allow for the removal of the Special Policy

Area 3 designation in the area, removing current restrictions on land development and increasing the opportunities for new residential and commercial space in the downtown area. Not only does this initiative dovetail with the intent of the Urban Centres and Planning Vision gamechangers, but it

also serves to support a future university in the Downtown by providing much needed residential support within 700 metres of a downtown site, as well as additional opportunities for retail amenities and office space to serve any strategic partnership opportunities with the local business community.

### Urban Centres



This gamechanger will identify emerging urban centres of Brampton, including Downtown Brampton, and put in place a planning and design framework to encourage a collaborative city building approach. The aim is to create productive, creative and vibrant urban places. Expected benefits of the Urban Centre gamechanger include the creation—and strengthening—of destinations to attract

businesses and residents to the city, creation of diverse experiences that could attract private investment, co-location of uses supported by diverse housing options and increases in density to support amenities and uses. These benefits not only support the location of the university and CEIC in an urban centre, but are also achieved and enhanced by locating the university and CEIC in the downtown, an important urban centre.

The creation of “sticky” facilities such as the university and CEIC will help bring people to the downtown and keep them there. There are examples around the world of facilities such as the CEIC acting as a catalyst that promote residential growth to a downtown. The Seattle Public Library Economic Benefits Assessment stated:

*The [Seattle Central] Library is already being used to market downtown livability. The General Manager of Harbor Steps, a downtown mixed-use development, described the new Central Library as part of a collection of*



*attractions and amenities that make Downtown a desirable residential location.<sup>7</sup>*

Increased residential and office development in Downtown Brampton would contribute towards the density target identified for the Downtown Urban Growth Centre in the Growth Plan for the Greater Golden Horseshoe.

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<sup>7</sup> *The Seattle Public Library Central Library: Economic Benefits Assessment; The Transformative Power of a Library to Redefine Learning, Community and Economic Development*; Berk & Associates, July 2015

## **6.0 Associated Benefits to the City of Brampton**

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In addition to the economic impacts that can be quantified in terms of specific economic outputs such as economic spin-off and job creation, a new university campus in the City of Brampton would have significant, transformative impacts on the entire community.

It is no secret that the City of Brampton currently occupies an important position on the national stage. Brampton continues to be a location of choice for thousands of new households and businesses each year seeking a stable, prosperous footing in the Greater Toronto Area.

Brampton is midst of a revised Strategic Plan with a new focus on 6 “Game Changers” to boldly shift the growth and focus of the City.

One key Game Changer is the University. As of mid-2017, Brampton was ranked as the 9th largest construction market in Canada (measured in terms of overall residential, commercial, institutional and industrial construction value).

By 2041 Brampton is forecast to reach a population of 900,000 residents – putting in on-par with major Canadian urban centres such as Edmonton (pop. 810,000) or Calgary (pop. 1.1 million).

While Brampton continues to play an increasingly prominent role on the national stage, the lack of a prominent university (or any major post-secondary institution for that matter) is clearly one of missing institutional pillars for a city of its size and importance.

In this section we will briefly explore some of the associated impacts (or benefits) that would accompany a major university facility. These benefits have been articulated in term of the benefits on students and families, as well as local business conditions.



## IMPROVING THE LIVES OF STUDENTS & FAMILIES

The City of Brampton is currently home to approximately 59,900 young adults aged 18-24<sup>8</sup>. Between 2011 and 2021 this demographic group is expected to grow by over 35,000 in the City of Brampton alone.

As young residents continue to occupy a growing share of the City's overall population base, there will be mounting pressures to ensure that post-secondary educational opportunities are strategically aligned with the cities and regions where the need is greatest.



### Helping to Deliver Affordable Education Options

The cost of a four-year university degree in Ontario continues to be a major financial challenge for students and families. As costs escalate, and as household debt grows, the decision to pursue post-secondary education means that students must make tough decisions to make their savings and loans last. Approximately one-half (i.e., 48%) of all Ontario students opt to live at home while attending university. For full-time Brampton student attending university in Downtown Toronto, the costs of a monthly pass (using Presto) would be \$215/month whereas the cost of commuting to York University would be nominally less at \$210/month. By comparison, a student living and going to school in Brampton would pay \$118/month. Over the course of an 8-month academic year, students would save nearly \$800 alone in commuting costs.

### More Time for Family

The presence of a university within Brampton would free up more time for families to spend time together. It is estimated that the average Brampton student currently pursuing post-secondary studies in downtown Toronto would spend as much as 800 hours per year commuting to and from school. This would not only have positive impact on family time, it would also substantive impact on the environment.

### Strengthening the Extended Family Network

While many students choose to remain at home with their parents, others are able to leverage extended family relationships (such as aunts, uncles, grandparents, etc.) when choosing affordable pathways to postsecondary education. Universities and colleges often play an important role in bridging families that live in different locations around the world.

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<sup>8</sup> Based on the 2016 Census

As a richly diverse City, residents of Brampton maintain strong family and personal connections within the context of an increasingly more globalized world. The presence of a university would certainly provide Brampton-area families with an opportunity to support (or host) other family members (i.e. nieces, nephews, cousin, grandchildren) as they pursue academic opportunities in Canada.

### **Cultivating Town and Gown Relationships**

The cultivation of campus and community partnerships, commonly referred to as town and gown relationships, provides a number of opportunities to enhance the social fabric of a community at-large. Numerous studies have highlighted successful town and gown relationships as and the role they play in building community cohesion. These benefits include increased volunteerism provided by students and university staff, input into community initiatives such as the revitalization of downtowns and the creation of programs that emphasize the importance of sustainability and environmental protection.

A university campus in Brampton provides an opportunity to actively engage students and cultivate healthy town and gown initiatives that benefit a diverse array of residents in the City.

### **Continuous Learning and Program Accreditation**

The presence of a university in Brampton could play an important role in terms of educational programming designed to meet the needs of a more internationally mobile workforce. While the exact programming of a Brampton university remains unknown at this time, there is growing anecdotal evidence to suggest that a key component of Canada’s post-secondary educational landscape will involve more programs designed to support accreditation of foreign credentials, continuous adult advanced learning, and post-graduate career development and advancement programs. To this end, universities are playing a more integral role in the lives of a wider audience of students.

### **Retaining Young People**

Many communities without post-secondary learning opportunities experience what is commonly described as “brain-drain”. While the impacts of brain drain are widely discussed within the context of cross-border and international labour markets (i.e., highly skilled Canadians putting their experience into practice in the US or overseas), many communities – especially those without post-secondary educational opportunities – routinely cited as a *hollowing-out* of young people who simply move away to pursue their educational and career aspirations. Universities and colleges play an important role in reversing this trend.

## BOOSTING THE BRAMPTON BUSINESS COMMUNITY

Brampton is widely regarded as one of Canada’s leading business centres.

The City of Brampton maintains a long-range vision of the future which is strongly based and equally focused on the redevelopment of its Central Area (i.e., downtown), and on the attraction of new business development in its modern, strategically located business parks.

The City of Brampton continues to be a major destination for international investment and trade. In many respects, Brampton plays an integral role in the economic standing of Canada and Ontario. Brampton is a leading Canadian business location across numerous key sectors, such as: manufacturing, wholesale trade, distribution and business services.

As Brampton executes its strategy for economic growth, the City’s business landscape is being quickly being transformed by a growing number of large head offices operations, pioneering life sciences firms, business services and IT and communications firms.



## Enhancing the Vitality and Viability of Downtown Brampton

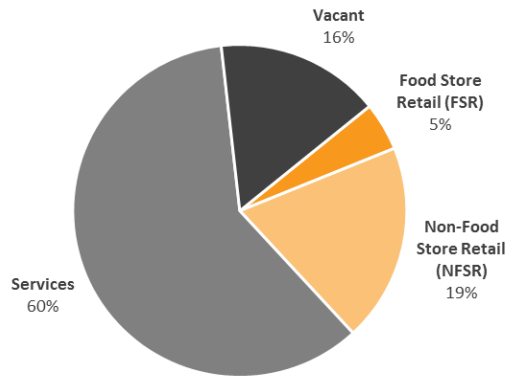
The Growth Plan for the Greater Golden Horseshoe identifies Downtown Brampton as an Urban Growth Centre that must be planned to achieve a density of 200 residents and jobs, combined, per hectare. One way the City can achieve this density target is to encourage new development in the downtown through the creation of “sticky” destinations, such as a university campus or the CEIC. Destinations such as these will help draw people to the downtown and keep them there.

We fully anticipate that major public investments in projects of this scale will trigger the specific knock-on effects that ultimately support other community and policy ambitions related to intensification, transit and placemaking. In a city such as Brampton, investments that directly improve the day-to-day lives of residents expedite renewal efforts in the downtown area leading to transit-supported housing and employment growth opportunities.

Based on the information illustrated in Figure 26, the area within a 700m radius of Queen Street and Main Street contains a mix of 335,000 square feet of retail and service space.

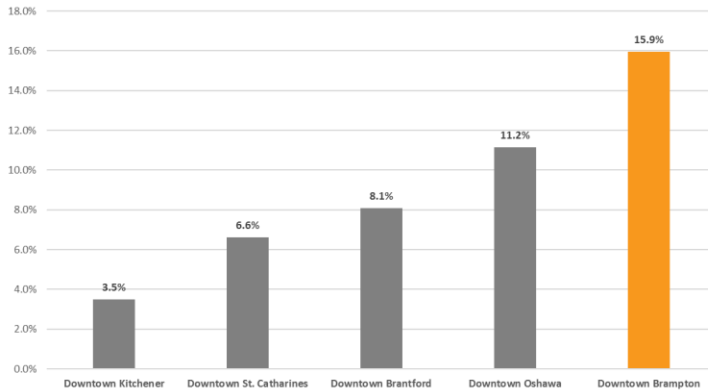
To estimate the potential impact a new university campus and CEIC could have on Downtown Brampton we have analyzed various Ontario municipalities that have a comparable sized post-secondary facility located within the downtown area. As part of this analysis, we have evaluated the retail/service commercial space located within a 700m radius of several recent university facilities located in a downtown. As illustrated in Figure 27, the vacancy rates in these study areas varies from 3.5% to 11.2%, which is lower than the 15.9% vacancy rate in Downtown Brampton.

**Figure 26: Existing Downtown Brampton Retail/Service Commercial Inventory**



SOURCE: urbanMetrics inc., based CoStar retail tenant data for 700m radius area centred around the area of Queen Street and Main Street in Downtown Brampton.

**Figure 27: Retail/Service Commercial Vacancy within 700m radius of Downtown University Facilities**



SOURCE: urbanMetrics inc., based on CoStar Group retail tenant information as of August 2017. Brantford study area vacancy based on detailed inventory performed by urbanMetrics in July 2016.

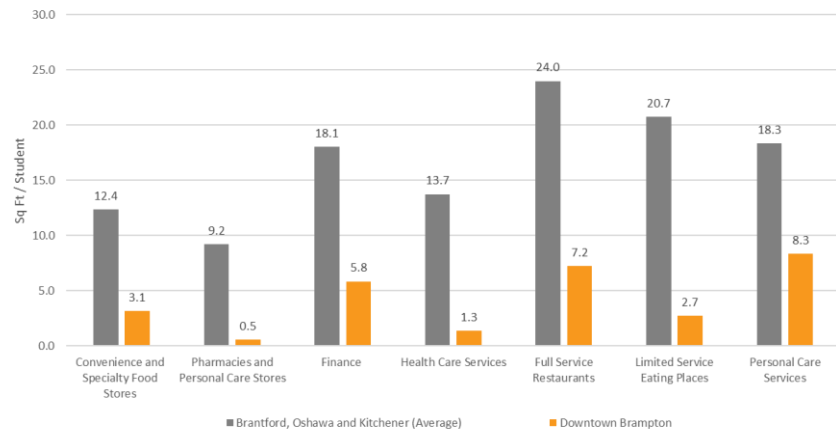
In order to better understand the potential effect on the retail/service commercial structure of Downtown Brampton from a university campus, we have compared the amount of retail/service commercial space per student for selected categories to the average space per student currently estimated in the Brantford, Oshawa and Kitchener studies areas. The categories we have reviewed are those most likely to support the needs of future university students and include:

- Convenience and Specialty Food Stores (e.g., Convenience Stores and Specialty Food Stores);
- Pharmacies and Personal Care Stores (e.g., Pharmacies, Beauty Supplies, Optical Goods);
- Finance (e.g., Banks and other financial institutions);
- Health Care Services (e.g., Physicians, Dentist, Chiropractors);
- Full Service Restaurants (e.g., Eat-in restaurants);
- Limited Service Eating Places (e.g., Starbucks, Subway, Pizza Pizza); and,
- Personal Care Services (e.g., Hair Salon, Dry Cleaning, Day Spa).

We note that although the increased demand for retail/service commercial space with the introduction of 1,000 students is likely fairly limited, once the university student population in Downtown Brampton reaches some 5,000 students, there will be a greater need for selected retail/service commercial space within 700m of the university, based on the average observed in downtown Brantford, Oshawa and Kitchener. Although at this stage it is hard to forecast the exact amount of retail/service commercial space required to serve these students, it is reasonable to assume that as the university student population grows, the amount of retail/service commercial businesses in the area will likely increase, absorbing space that currently sits vacant, as well as eventually driving demand for new retail/service commercial spaces. Figure 28 illustrates the potential opportunities for new investment in selected retail/service commercial space based on 5,000 future students located in

Downtown Brampton. We note that the addition of the CEIC to the downtown would further increase demand in these selected categories.

**Figure 28: Retail/Service Commercial Space per Student**



SOURCE: urbanMetrics inc., based on CoStar Group retail tenant information as of August 2017. Brantford study area based on detailed inventory performed by urbanMetrics in July 2016. Assumes 5,000 future students located in downtown Brampton.

Furthermore, locating the new university campus and CEIC in Brampton’s downtown has many merits and few drawbacks, as originally summarized in our November 19, 2015 *Economic Impact Statement Major University Capacity Expansion* prepared for the City. These strengths, weaknesses, opportunities and threats of locating the university, and CEIC, in downtown Brampton include:

**STRENGTHS**

- Aligns closely with Key Growth Management Policies (Provincial, Regional, Local).

- Aligns with the MAESD’s Major Capacity Expansion Policy Framework.
- Delivers on Council’s commitment to Downtown Revitalization & Investment.
- Linkages to local and regional transit facilities.
- Linkages with existing public amenities (parks, theatres, etc.).
- Creates an opportunity to re-populate and re-animate Downtown Brampton.
- Increased land values and property assessment.
- Reputational Uplift for Downtown Brampton.

**WEAKNESSES**

- Complicated land assembly.
- Limited control on future expansion.

**OPPORTUNITIES**

- Opportunity for small, third- party enterprise (retail, restaurants, cafes, bars, etc.).
- Potential to re-use and re-purpose under-utilized heritage assets that exist in downtown.
- Opportunity to create a “car-free” pedestrian zone.

**THREATS**

- Potential displacement of existing businesses.
- Construction and transitional disruption to existing business community.



## Managing the Future Talent Pool

Over the next 15 years, the Brampton economy will support 74,000 net new jobs. To put this level of economic growth into perspective, 74,000 jobs added over a 15-year period would be comparable to the total number of jobs currently found in North York City Centre, Yonge-Eglinton Centre, Scarborough Town Centre, and Etobicoke Centre, combined.

To ensure that Brampton can fulfill its planned employment growth potential, decision-makers must understand the importance of maintaining and supporting a well-managed pool of talent capable of meeting the changing needs of our society.

## Diversifying Brampton's Economy

Existing strengths in manufacturing, transportation and warehousing, as well as education characterize Brampton's economy. By establishing a new university campus in Brampton there is an opportunity to further diversify the City's economic base by growing sectors which are currently integral to the regional economy but presently underrepresented in Brampton.

Universities have the capacity to attract the types of businesses that rely more heavily on a university education. This can be seen in the success of research and innovation parks affiliated with numerous Canadian universities. These research and innovation parks provide a backdrop for researchers and companies to work more collaboratively, which can ultimately generate spin-off benefits for the local municipality and the workforce.

## Development of Industry Clusters

Universities are increasingly identified as a central asset in the development of industry clusters. These industry clusters are commonly aligned with the research interest being carried out at the local university. For example, Waterloo has established industry clusters in areas of technology such as software that are closely aligned with research being conducted at the

University of Waterloo. Similarly, Guelph has established industry clusters in agricultural biotechnology and agri-food, which are closely aligned with the research activities being pioneered at the University of Guelph.

A university campus in Brampton has the potential to nurture the development of new industry clusters in the municipality. The type of industry clusters that can ultimately be established in Brampton will depend on the expertise and resources available at the new university campus. Nonetheless, a new university campus in Brampton provides an opportunity to enhance Brampton's economic base through the creation of industry clusters.

## Enhancing Strategic Partnerships between Business and Learning

Universities and business groups have long maintained close and mutually dependent relationships. Self-regulated professions such as accountants, lawyers, physicians, engineers, architects and nurses work collaboratively with post-secondary institutions to design and implement new educational curriculum that meets the changing needs of its workers. Ontario's post-secondary educational system is also playing an active role in offering specialized programming that is designed to improve the skills of workers that are adapting to the fast-paced changes in the modern workplace. Skills development and career-based learning programs are playing an increasingly more important role within our institutions.

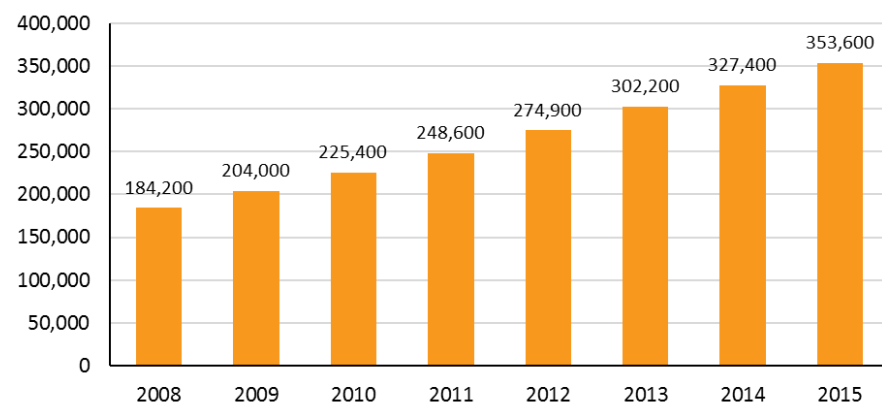
## Improving Global Connections

International education has been identified as a key driver of Canada's future economic prosperity, particularly in the areas of technology, innovation, trade and human capital development. The Government of Canada has identified international education as one of 22 priority sectors where Canada currently enjoys a strong competitive position.

Universities have the capacity to not only generate but accelerate global collaboration and innovation. As our world becomes increasingly more integrated, peer relationships formed within our learning institutions become the launching ground for lasting partnerships, innovation, technology transfer and international trade.

According to the Canadian Bureau of International Education (2016), Canada is currently ranked as the **sixth (6<sup>th</sup>)** most popular destination for international studies. Between 2008 and 2015, international student enrollment in Canada has increased by 92%, increasing from 184,200 to 353,600. University students account for more than half (50%) of all international students in Canada.

**Figure 29: International Students in Study, Canada**



Source: urbanMetrics inc., based on *A World of Learning 2016: Canada's Performance and Potential in International Education*, Canadian Bureau of International Education.

In 2014 the Government of Canada launched an aggressive new strategy designed to further expand Canada’s role as an international destination of choice for students.

*Canada’s International Education Strategy* is focussed on growing the number of international students in Canada to **450,000 by 2022**. The strategy is intended to be a blueprint that will attract talent and prepare Canada for the 21<sup>st</sup> century.

The strategy is concentrated on six key markets: India, China, Brazil, Mexico, Middle East/North Africa, and Vietnam.

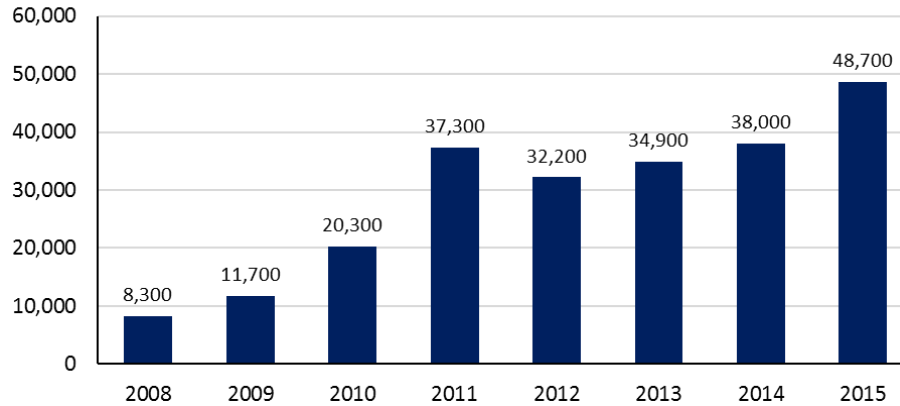
The Plan underscores the need to build additional educational capacity across the entire educational system, with an emphasis on building Canada’s status as go-to market for the world’s best and brightest students and researchers.

### Strengthening Connections with South Asia

Brampton is a city defined by its diversity and growth. The South Asian population of Brampton now represents approximately 40% of the City’s total population base.

At 200,000+, Brampton’s South Asian community is larger than the total population of many Ontario university towns. In fact, the City’s south Asian community is larger than Kingston and Peterborough, combined. According to data provided by the Canadian Bureau for International Education, as of 2015 South Asian countries (India, Pakistan, and Bangladesh) currently account of 16% of all international students coming to Canada. India alone accounts for more than 13% of all international students visiting Canada – second only to China (34%). Since 2008, there has been a dramatic increase in the number of international students from India. Based on most recent data, there are an estimated 48,700 students from India enrolled in Canadian academic institutions, an increase of some 345% since 2008.

**Figure 30: International Students in Canada from India**



Source: urbanMetrics inc., based on *A World of Learning 2016: Canada's Performance and Potential in International Education*, Canadian Bureau of International Education.

Brampton not only provides an excellent platform upon which to help further build international student capacity, there are also important direct cultural and business linkages that could be reinforced by virtue of a stronger academic ties between Canada and key South Asian markets, particularly India and Pakistan.

### Rounding Out Brampton’s Key Employers

In employment terms, a new university campus would provide significant depth to Brampton’s current roster of Top Employers. A university campus with 10,000 students would directly support more than 800 jobs on-site. This scale of facility would place it firmly within the ranks of Brampton’s leading private sector employers such as Canadian Tire (900 jobs), Coca-Cola (750 jobs), Gamma-Dyna Medical Labs (700 jobs) and HBC (600 jobs).

## PROVIDING OPPORTUNITIES FOR BRAMPTON RESIDENTS TO THRIVE AT HOME

As identified in the previous sections of this report, a 5,000-student university campus and the CEIC are expected to increase the number of jobs in Brampton through ongoing operational expenditures and student and visitor spending. This is in addition to employment associated with the construction of these facilities. These jobs will include people directly employed by the university and CEIC, in addition to the indirect and induced jobs at new business established in the area looking to serve burgeoning market of new students, employees and residents visiting the downtown.

In addition to the jobs created by the operation of the university campus and CEIC, the proposed incubator space located within the CEIC has the potential to create jobs through an improved, more robust ecosystem around business start-up, innovation and commercialization.

As part of our research, we have reviewed various incubator spaces in the GTA to determine the number of businesses supported by the incubator, the revenue generated by these firms, funding raised and new jobs created by firms operating in or graduating from the incubator.

For example, based on information from the Ryerson Digital Media Zone (DMZ), since 2010, the 309 start-ups supported by the DMZ have created over 2,900 jobs.

Closer to home, incubators such as the RIC Centre in Mississauga and HalTech in Oakville have had a positive impact on employment in these municipalities. The RIC Centre has created over 650 jobs, while HalTech created 50 jobs in the past year.

It is important to note that many of the jobs created at business incubators ultimately remain embedded in the region, even after a company ‘graduated’ from the incubator.

Based on survey research conducted on behalf of the David Johnston Research and Technology Park (R+T Park) in the City of Waterloo, 87.5% of business founders intend to maintain and grow their operations in Waterloo Region.<sup>9</sup> The most significant reasons identified for staying close to the incubator included continued access to business support services such as mentorship, access to financing and marketing. Therefore, the construction of the CEIC and associated incubator could contribute to overall employment growth in Brampton through the commercialization of new products and services.

The jobs created directly through the construction and operation of the university and CEIC, as well as the spin-off jobs created by the commercialization of new products and services will have a positive impact on the live-work ratio in Brampton<sup>10</sup>. The employment policies in the City of Brampton Official Plan encourage a City-wide activity rate of 50% by 2031, which is equivalent to a live-work ratio of 2:1. This live-work ratio will not only contribute to the sustainability of Brampton, but also enhance the quality of life in the community.

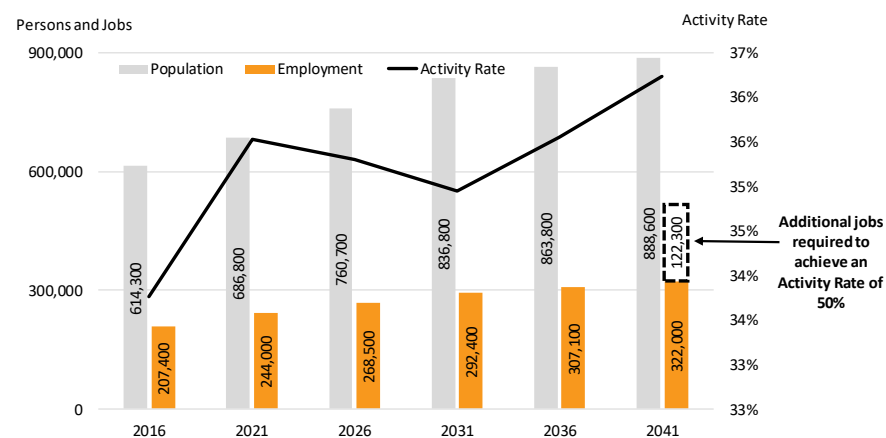
Data from the Census of Canada indicates that local population growth is out-pacing employment growth. As a result, the City’s activity rate has failed to make the gains one would expect.

The City of Brampton currently has an activity rate of 34%, which is forecast to increase to 36% by 2041.<sup>11</sup> To achieve a live-work ratio of 2:1, the City would need to accommodate 122,300 more jobs by 2041 than are currently forecast (Figure 31).

A game changing investment by Brampton in a university campus and CEIC will contribute towards the City achieving the employment policies in the Official Plan through the creation of jobs related to the operation of these facilities,

ancillary businesses that service students and visitors and jobs at start-ups that are incubated in the CEIC.

**Figure 31: Forecast Population, Employment and Activity Rate in Brampton**



Source: urbanMetrics inc. based on data from Hemson Consulting Ltd.

## Creating Employment Opportunities for Youth

Youth unemployment remains a major concern in municipalities across Ontario. Brampton is no exception. A report prepared by TD Economics on youth employment in Canada<sup>12</sup> identified that since the recession in 2008/2009, the youth unemployment rate has remained persistently high and is also elevated relative to older Canadians. Leading up to the recession, the average employment rate for young people in the Toronto CMA was approximately 14% (Figure 32). However, since the recession, this unemployment rate has remained elevated nearly 17%.

<sup>9</sup> David Johnston Research + Technology Park Impact Study, June 2013, PWC.

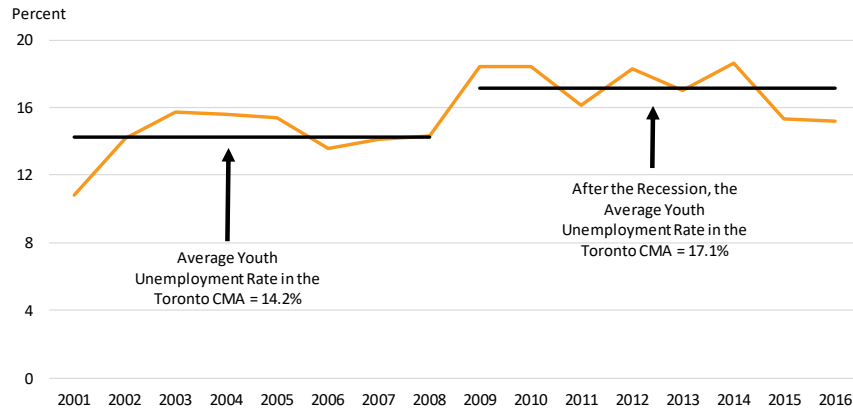
<sup>10</sup> The live-work ratio is defined as the proportion of residents to employees. A 2:1 live-work ratio is equal to an activity rate of 50%.

<sup>11</sup> Based on City-wide population and employment forecasts by Hemson Consulting Ltd.

<sup>12</sup> Young and Restless, A Look at the State of Youth Employment in Canada, TD Economics, December 2014.

The elevated youth unemployment rate in the Toronto CMA since the recession is consistent with youth employment data for Peel Region. Before the recession, the youth unemployment rate in Peel Region was approximately 13%. However, since the recession the unemployment rate has averaged 17.7%, slightly higher than the Toronto CMA.

**Figure 32: Youth Unemployment Rate (Age 15 to 24) – Toronto CMA**



Source: urbanMetrics inc. based on data from the Statistics Canada Labour Force Survey.

High youth unemployment is a serious matter. Research has shown that weaker employment prospects for youth present a growing drag on wealth accumulation and lifetime earning potential. In addition to high unemployment, TD Economics also highlighted the growing challenges around underemployment among Canadian youth, as many young Canadians find themselves stuck in positions of precarious employment.

The role of incubators is to foster young creative minds. The creation of the CEIC and associated incubator space within it could have a profound impact on youth employment in Brampton. A review of incubator spaces across the GTA

highlight that many of these incubators provide youth placements and support start-up firms headed by youth. For example, the RIC Centre identified that 39% of its clients are under the age of 30. Similarly, 13.5% of the start-ups supported by HalTech had youth founders.

In Downtown Brampton, the Lab B incubator operates the Zero Gravity program, which is a 15-week program for high school students that provides the resources and connections to explore pathways to employment. It is no longer the case that youth can expect to graduate from university and get a high paying, stable job. Increasingly young people have to create their own jobs. The CEIC and incubator will help facilitate the creation of these new jobs.

With young people in Brampton facing increasingly difficult employment conditions, the CEIC and associated incubator represents a new community outlet where youth can develop business skills, build confidence, advance new ideas, and create new pathways for success.

A new university campus will also contribute towards lower youth unemployment in Brampton. The university and spin-off businesses will create many jobs that will be available to youth. In addition to jobs that will be available to youth, a university education also leads towards increased employment opportunities and higher lifelong earning potential. For example, based on research from the Council of Ontario Universities, 87% of university graduates had found employment with 6 months of graduation, increasing to 93% two years after graduation.<sup>13</sup> This is consistent with information from the 2011 National Household Survey (NHS), which identified an unemployment rate 10.9% for people with a high school education. This was nearly twice the unemployment rate of university graduates, whom collectively had an unemployment rate of only 5.7%.

As Ontario moves towards a more knowledge-based economy, people without a university education will increasingly be left behind. Based on findings from the Canadian Occupation Projection System, between 2010 and 2022, 71% of

<sup>13</sup> Council of Ontario Universities Report to the Community: 2013-2014 Annual Report.

all new jobs will require a post-secondary education. By establishing a new university campus in Brampton, it will help ensure that youth in the municipality have the skills and experience necessary to thrive in this new economy.

### Increased Earning Potential of University Graduates

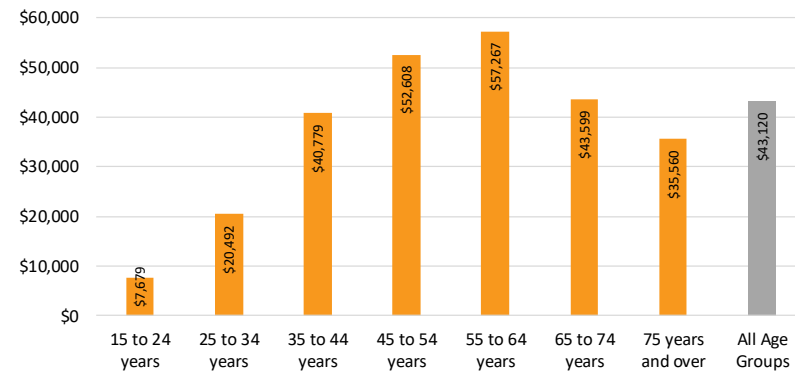
A university degree brings with it many advantages, one of which is higher life-long earning potential.

Students graduating from the Ryerson-Sheridan campus in Brampton will earn a higher income than people who only have a high school education. Based on data from the NHS, the average youth (15 to 24 years of age) in the Toronto CMA with a university education earned almost \$7,700 more per year than a youth with only a high school education. This increased to over \$57,000 per year for a university graduate aged 55 to 64 (Figure 33).<sup>14</sup>

Based on estimates prepared by urbanMetrics, a downtown university campus could result in upwards of \$246 million in increased earning potential for graduating students over the first 10-years of operation at the university.

This estimate is conservative, as the increased earning potential of university graduates continues to compound as they progress through their careers. If graduates from the Downtown Brampton campus remain in Brampton, we anticipate that these premium incomes will deliver additional tailwind support for companies serving the Brampton marketplace.

**Figure 33: Increased Earning Potential from a University Education, Toronto CMA**



Note: Inflated to 2016 dollars.  
Source: urbanMetrics inc. based on National Household Survey.

<sup>14</sup> Inflated to 2016 dollars based on average weekly earnings data in the Statistics Canada Labour Force Survey.

## RESEARCH COLLABORATIONS, INCUBATORS AND START-UPS

The inclusion of incubator space—space designed to nurture and support young businesses through the early stages of their start-up life cycle—may provide Downtown Brampton with additional demand for office space in the future as these companies grow and flourish.

Commercial incubator spaces can range anywhere from 1,500 to 215,000 square feet. According to US-based research, the majority (60%) of incubators are smaller than 40,000 square feet<sup>15</sup>. In general, **30,000 square feet of net rentable space is widely regarded as the optimal size for achieving operational efficiencies**. This amount of incubator space can typically support upwards of 10-12 start up companies in early growth stages.

The following are some key considerations that should be considered in incorporating incubator space into the CEIC:

- **Scalability is important.** If the space is too large it may take too long to fill and if it is too small it may not generate enough revenue, both leading to difficulty breaking even. The ability to grow in phases allows the incubator to keep costs under control and ensures the facility does not feel empty.
- **Set aside space for client growth.** This will allow users to scale up in the early days of their business, without having to leave the support of the incubator before they're ready. 5 to 10 percent is generally enough space to facilitate modest growth.
- **Incubators tend to have higher than normal turnover rates.** This is due to regular turnover as businesses move through the start-up cycle. As such, it is a good practice to use 80 percent as your

breakeven point in order to take into account this frictional vacancy (or churn).

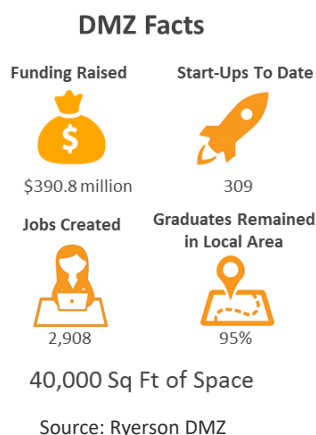
- **Not all incubators grow at the same rate.** In rural or economically depressed areas it may take up to 5 years to reach target occupancy
- **Design is important to an incubator's success.** Important factors include:
  - Highly efficient space (i.e., 85 percent or more of the space is rentable);
  - A layout which encourages networking and collaboration; and,
  - Access to up-to-date data communications infrastructure and equipment.

Incubator spaces have existed in North America for many years, however, several successful incubators have recently emerged as important hotbeds of innovation in Ontario and the western GTA.

<sup>15</sup> National Business Incubation Association (NBIA) *State of the Business Incubation Industry, 2006*.

## Ryerson Digital Media Zone (DMZ)

The Digital Media Zone (DMZ) affiliated with Ryerson University is widely cited as a best-practice for Canadian incubators. Opened in 2010, the DMZ is now the #1 university business incubator in North America and #3 in the world<sup>16</sup>. The DMZ began as a space of about 5,000 square feet in the heart of Downtown Toronto and has since grown to approximately 40,000 square feet to date, usually in increments of 5,000 to 10,000 square feet. Open to entrepreneurs and innovators from across the world, the DMZ contains an event space for 150 people, 15 meeting rooms, a smart classroom, social amenities such as a ping pong table and 5 private phone booths. Since its launch, the DMZ has incubated 308 start-ups, raised more than \$385.5 million in funding and created more the 2,879 jobs. 95% of DMZ graduates remain in the local area<sup>17</sup>.



The DMZ offers four core services:

**Coaching** – includes access to entrepreneurs-in-residence, mentors and advisors, as well as access to Advisory Council members and Pitch Coaching.

**Customers** – includes sales programs (DMZ Playbook) to accelerate growth and access to industry nights and tours to build strategic industry partnerships.

**Capital** – access to a global network of investors, including venture capitalists and angel investors, through 1:1 meeting and investor-led workshops.

**Community** – start-ups become part of a local community with access to P2P learning, educational workshops, conferences, competitions and access to talent, as well as a global community containing international partnerships and assistance with government relations.

Start-ups can apply online for admission. Applications are then pre-screened to assess company stage and eligibility for the program. Selected start-ups are then invited to pitch to the Startup Services Team. Once accepted, start-ups are offered a free two-month membership with the option to stay on for \$380 per desk afterwards.

Once admitted to the DMZ, start-ups have access to business perks (24hr access, meeting rooms, mail services, event space, vendor discounts), life perks (bike storage, shower facilities, garment station, ping pong, mental health services, yoga classes) and food and fun perks (daily breakfast and snacks, coffee, pancake Wednesdays, good scotch Fridays).

Start-ups in the DMZ can be from any industry sector. However, they typically have expertise in: Finance, Education, Healthcare, Retail, Sports, Gaming, Fashion and Transportation.

<sup>16</sup> As ranked by UBI Global 2015-16

<sup>17</sup> Defined as within 82km by the UBI Global.



## RIC Centre

The Research Innovation Commercialization (RIC) Centre is the entrepreneur and innovation hub for Mississauga, Brampton and Caledon. Located in the Xerox Research Centre of Canada, the RIC Centre is some 2,600 square feet of floor space and offers free support services for entrepreneurs. For 2016-2017, the centre’s strategic focus has been on Advanced Manufacturing, Clean Technologies and Internet of Things (IoT) Digital Media.

### RIC Centre 2015-2016 Stats



Source: RIC Centre Annual General Report 2015-2016

The RIC Centre Incubator allows growing technology companies to work with a team of experts one-on-one. Since 2013, RIC Centre has helped over 700 start-ups raise over \$240 million in capital, generate over \$115 million in revenue, and create more than 650 jobs.

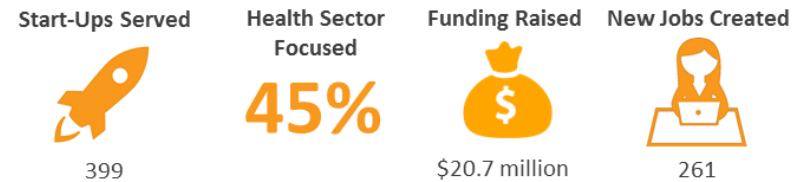
The RIC Centre Incubator works with companies, nearly ready to launch their product or have already made sales, to achieve a significant business milestone in the next 6 months and require office / lab space on a daily basis. Companies accepted into the incubator receive private office space, access to meeting rooms, access to lab space (at an additional fee), one-on-one mentorship, complimentary one-on-one meetings with top-tier professional service providers, investor pitch practice, educational training workshops and networking opportunities.

## VentureLAB

VentureLAB is located inside IBM’s headquarters in Markham. In the past 5 years, VentureLAB has tripled in size, serving over 1,500 companies along the way. Recently, VentureLAB has teamed up with IBM Canada to create the IBM Innovation Space – Markham Convergence Centre. Together they have built a technology accelerator inside IBM Canada’s headquarters to connect tech talent to the enterprise cluster of tech companies in York Region. Through this partnership, member companies receive unprecedented access to IBM talent and technology.

VentureLAB assists companies with an innovative product or service that is tech based and has some market traction. The core services offered include mentoring with their team of experts, partnerships with their 100 partners in the community to leverage resources and share expertise, and facilitating connections that helps accelerate the business growth of member companies.

### VentureLAB 2016 Stats



33,000 Sq Ft Hub and Collaborative Space

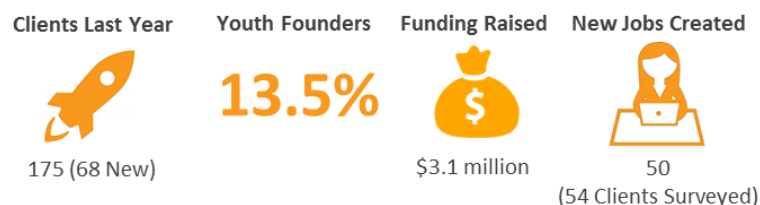
Source: VentureLAB Annual Review 2017

Over the past year, VentureLAB supported entrepreneurs in: Digital Media & ICT, Financial Services, Life Sciences & Advanced Health, Food & Beverage, Advanced Materials & Manufacturing, Clean Tech, Agri-tech, Tourism & Culture, Education and more.

## Haltech

Located in Burlington and Milton, the Haltech Region Innovation Centre is a non-profit organization that began in 2011 and has supported nearly 600 start-ups and entrepreneurs across the Halton and west-GTA regions. Haltech supports innovative companies within the in the Advanced Manufacturing, Digital Media & ICT, Clean Technology, and Life Sciences & Healthcare sectors.

### Haltech 2015-2016 Stats



Source: Haltech Annual Report 2015-16

Haltech’s services are organized into the HEAT™ program which offers expert business advising and learning workshops in entrepreneurship and commercialization for every stage of development, along with personalized mentoring from Entrepreneurs-in-Residence (EIRs) and Volunteer Startup Advisors. The HEAT™ program has three service levels:

**IGNITE** – focused on ideation and company creation, this level includes free workshops, access to a business consultant, market intelligence and referral to mentors/service professionals

**ACCELERATE** – focused on customer acquisition and market development, this level provides additional access to entrepreneurs-in-residence, funding and pitch opportunities

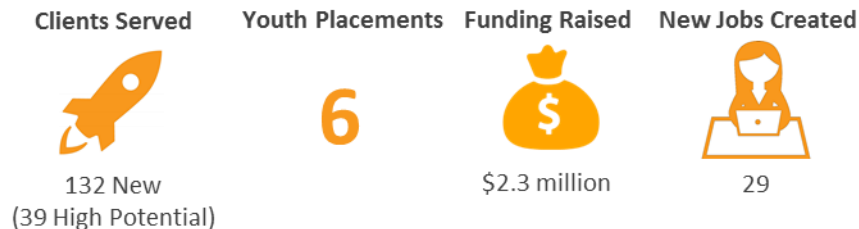
**RADIATE** – focused on scaleup and revenue growth, this level provides enhanced access and pitch opportunities

## Spark Centre

Beginning life in 2011 as Innovation Durham Northumberland (IDN), the Spark Centre was launched to work cooperatively with local entrepreneurs and organizations to cultivate and support a strong entrepreneurship culture within Durham Region and Northumberland County. In 2014, Spark Centre incorporated as its own organization and one year later, Spark Centre opened The Loft, Durham Region’s first start-up eco-system and incubator on the second floor of Core21 with 92 seats for local entrepreneurs. Spark Centre now has eight employees and has helped over 800 clients.

Based on information contained in the Spark Centre Annual Report 2017, the centre has raised \$10.6 million in client funding to date and served some 822 clients. In the last 3 years, the Spark Centre has created some 138 paid jobs and 84 youth placements.

### Spark Centre FY2017 Stats



Source: Spark Centre Annual Report 2017

The Spark Centre assists innovation and technology based businesses with funding & investment (e.g., grants, private investment, loans and angel funding), start-up services (e.g., business plan, marketing strategy, product development) and operational support services (e.g., organizational scaling, growth, manufacturing, distribution).

## Lab B

Founded in 2014, Lab B’s mission is to provide the resources, networking and knowledge that will help young people develop necessary skills and build companies. Located in Downtown Brampton, Lab B recently moved into a new, larger space at 60 Queen Street East which includes a recording studio, co-working space, meeting rooms and high-speed WiFi. Lab B focuses on supporting start-ups with founders who have demonstrated potential and are working full time to solve real problems making innovative use of technology with the potential to grow and scale.

### Lab B Stats (since 2014)



Source: Lab B

Lab B provides the following services:

**Business Modelling** – working with founders to hypothesize, validate and articulate the key elements of their business.

**Prototyping** – helping founders create a product development plan, design a prototype and build it out.

**Brand Development** – helping founders develop brandings and messaging that clearly their products value proposition.

**Community** – connecting founders to mentors, expert advisors, investors, customers, and other entrepreneurs.

**Access to Capital** – connecting founders with angel investors and helping them practice their pitch and make warm introductions.

**Workspace** – access to shared workspace, meeting rooms, and high-speed WiFi.

**Zero Gravity Co-op Program** – designed for high schools, this program uses an experiential learning program to build their skills through workshops and activities leading to the ability to one day start their own business.

## What Does This Mean for the CEIC?

The success of these incubators demonstrates the value and up-lift that these types of organizations can have in supporting entrepreneurship at the local level.

Each of these incubators have helped generate venture capital for young firms, and in doing so have created jobs in the local economy.

Based on statistics available from the DMZ and our own research in Waterloo and Kitchener, many of the incubated firms stay (or fully intend to stay) within the market they were established.

The creation of business incubator space in the CEIC could have a profound impact on the entrepreneurial capacity of Brampton’s start-up community. It will provide them with an outlet and the resources to bring their ideas from concept to reality. An incubator in the CEIC would both enhance and promote Brampton’s profile as a start-up friendly community. Venture capital raised by firms graduating from the incubator will have a direct impact on Brampton through the creation of jobs that may stay in City. While it is difficult to quantify, at this early stage, the direct jobs that come out of the incubator and CEIC, these new jobs will have a reverberating effect throughout the Brampton economy through the creation of jobs in supporting industries.

## Other Socio-Economic Benefits

In addition to the economic benefits associated with the CEIC and incubator space, this facility will also have a variety of socio-economic benefits that are more difficult to quantify, but are equally as important. The socio-economic benefits associated with a business incubator are highlighted in a report by the Centre for Digital Entrepreneurship and Economic Performance (DEEP)<sup>18</sup> and include:

- **Skills Development** – Incubators contribute towards the development of valuable skills, some of which are not gained through post-secondary education.
- **Cluster Formation** – There are many instances of incubators contributing towards the development of clusters that attract talent and capital to a geographic area. Notable examples include the Accelerator Centre and Communtech in Waterloo Region, which have contributed towards the creation of a technology triangle that extends between Waterloo and Toronto.
- **Network Enrichment and Density** – Incubators help establish interpersonal networks among entrepreneurs, investors and professionals that otherwise may not occur.
- **Creating and Entrepreneurial Culture** – Incubators contribute towards the fostering of an entrepreneurial culture by providing a safe place for people to explore new ideas.

More broadly, CEIC has the potential to become a platform for better community outcomes. These include:

- **Building Partnerships** with local schools to support coordinated learning and reduce out-of-school learning loss.
- **Giving virtual learning experiences a physical presence** in the community by offering events, meet-ups and multigenerational learning spaces and providing information/access to the best apps to support virtual learning.
- **Engaging youth** in dynamic learning labs that support interest-drive learning through use of digital media, mentors and networks of opportunities.
- **Creating alternative pathways** to learning, credentialing and certification that accelerates the integration of foreign trained professional into the local workforce.

## Productivity Gain from University and CEIC Research & Development

Research and development (R&D) has a significant and positive impact on the Canadian economy. The adoption of new and innovative products and services boost productivity in the economy and contribute towards strong economic growth. In Ontario, universities account for as much as one-third of R&D spending in the province. Therefore, the establishment of a new university campus and CEIC in Downtown Brampton will contribute towards productivity gains in the provincial economy.

The contribution of universities – and their affiliated innovation partners – towards productivity gains is often estimated using the Total Factor Productivity (TFP) approach developed by Fernand Martin (1998)<sup>19</sup>.

<sup>18</sup> Evaluating Business Acceleration and Incubation in Canada, Policy, Practice and Impact, October 2015.

<sup>19</sup> Fernand Martin. “The Economic Impact of Canadian University R&D.” Research Policy 27 (1998): 677-687

In the Council of Ontario Universities (COU) May 2017 study *Driving a Prosperous Future*, the TFP approach is used to estimate that in 2014, research conducted by Ontario universities had an economic impact of \$24.7 billion.

For the purpose of our research, we have analyzed the change in real GDP from 1981 – 2014, based on availability of information from Statistics Canada. As part of this approach, Martin estimates that 20% of economic growth is a result of increases in Total Factor Productivity. After removing the effects of foreign research and development (estimated by Martin at 31%), and identifying the share of TFP attributed to Ontario universities, we note that Ontario universities have generated about an \$18.5 billion impact on Ontario’s GDP since 1981.

As detailed in Figure 34, we estimate that research conducted by Ryerson University accounts for some \$284 million of the total impact. It is important to note that these productivity gains are not confined to a single year, but rather continue to have a positive effect on GDP until they are replaced by new and improved innovations.

We note that in 2015—the most recent year for which data is available—Ryerson University received some \$44.8 million in funds to support research, an increase of almost 10% from the previous year. With the establishment of a Ryerson University Campus in Downtown Brampton, it is reasonable to expect that a portion of Ryerson University’s future contribution to Ontario GDP growth will come through research and innovation taking place at the Brampton campus, as well as any potential partnerships that could be established with the CEIC.

**Figure 34: Economic Growth as a Result of Ryerson University Research**

Change in real GDP in Ontario since 1981 - 2014 <sup>1</sup>	\$391,374,000,000
Growth attributable to total factor productivity (TFP) <sup>2</sup>	20%
<b>Total Factor Productivity</b>	<b>\$78,274,800,000</b>
Less: Exclusions of Foreign R&D effects <sup>3</sup>	\$54,009,612,000
Share of Ontario Universities <sup>4</sup>	\$18,475,000,000
<b>Ryerson University's Share of Total Factor Productivity <sup>5</sup></b>	<b>\$284,000,000</b>

Source: urbanMetrics inc. Rounded to the nearest \$1 million.

<sup>1</sup> Based on Statistics Canada CANSIM Table 384-0038. 1981 data adjusted to 2014 dollars using Bank of Canada inflation calculator.

<sup>2</sup> As per Fernand Martin. “The Economic Impact of Canadian University R&D.” Research Policy 27 (1998): 677-687

<sup>3</sup> Estimated at 31.0% by Fernand Martin. “The Economic Impact of Canadian University R&D.” Research Policy 27 (1998): 677-687

<sup>4</sup> Estimated at 34.2% based on Statistics Canada CANSIM Table 384-0038 for the year 2014.

<sup>5</sup> Estimated at 1.5% based on RESEARCH Infosource Inc. *Canada’s Top 50 Research Universities 2016*, FY2014 data.

## **7.0** Precedents for Local Contributions to University Expansions in Ontario

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There are a variety of financial and non-financial (i.e., community) benefits that have been examined in this report which highlight the value of a contribution by the City of Brampton towards establishing a new university campus. For example, construction and operation of a university in Brampton will bring increased economic growth and jobs to the municipality, along with their associated spin-off benefits.

There are also a variety of non-financial benefits that are more difficult to measure, but nonetheless can have a significant impact on the local economy. These include promoting the City as an innovative economy; fostering entrepreneurialism; and providing Brampton residents with an opportunity to pursue post-secondary educational options closer to home.




























These benefits of post-secondary education have prompted some municipalities to provide financial contributions to help secure a university campus, or in some cases expand an existing campus. In fact, one criteria identified in the Major Capacity Expansion Policy Framework prepared by the MAESD as part of the first round of the funding proposals was “evidence of substantial support from the host community, including financial contributions and land ownership”. As part of the first round of submissions for funding from the MAESD, the Town of Milton, City of Barrie and City of Markham all approved financial and non-financial contributions for a new university

campus. Financial and non-financial support from host municipalities is a practice that has been adopted by a number of municipalities in recent years. Based on publicly available information, Figure 35 summarizes nine host municipalities that, since 2008, have committed financial and non-financial support to secure a university campus or expand an existing campus.

As shown, municipal contributions range from an \$8 million contribution by the City of Cambridge towards the expansion of the University of Waterloo School of Architecture to a proposed \$50 million contribution by the Town of Milton and Region of Halton towards a Laurier University campus in Milton. On average, where information is available, municipalities contributed an amount equal to 27% of the construction costs of a new university campus. Based on planned enrolment capacity, these host municipalities contributed almost \$8,000 per student. However, this underrepresents the full contribution made by the municipality, as in some cases the land value associated with contribution was not identified.

Overall, all host municipalities, with the exception of Milton which contributed land, provided a cash contribution to the university for the construction of the new facility. Many of these contributions amounted to \$500,000 per year over a 10 to 15-year horizon. In addition, four of the seven host municipalities also provided a land contribution, typically in the downtown of the municipality.

Figure 35: Summary of Financial and Non-Financial Support from Host Municipalities

 	 	 	 	 	 	 	 	 
\$8 M contribution	\$10 M* contribution	\$10 M contribution	\$10 M contribution	\$11 M contribution	\$14 M contribution	\$20 M contribution	\$25 M* contribution	\$50 M contribution
360 Students	1,600 Students	2,300 Students	500 Students	1,500 Students	3,100 Students	4,000 Students	5,000 Students	2,500 Students
\$22,200 Per 	\$16,700 Per 	\$4,350 Per 	\$20,000 Per 	\$7,000 Per 	\$4,500 Per 	\$5,000 Per 	\$5,000 Per 	\$20,000 Per 

Source: urbanmetrics inc. See Appendix D for detailed contributions.

\* Municipal contribution excludes value of land contribution.



## 8.0 SWOT Analysis

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The question of whether the City of Brampton should directly support post-secondary education is a matter for public debate. Based on the facts and figures that we have reviewed as part of this exercise, we believe that there is a strong case to support the creation of an innovation hub within Downtown Brampton. This innovation hub would be supported and advanced by two key pillars: a new **University Campus** which can scale up to 5,000 or more students over time; and a new **Innovation Centre** (the CEIC) that becomes the central destination for residents looking to pursue opportunities related to life-long learning, innovation and collaboration.

The following section lays out the **Strengths**, **Weaknesses**, **Opportunities** and **Threats (SWOT)** of advancing city-supported policies leading toward the creation of an innovation hub in Downtown Brampton.

In preparing this SWOT, we have selected three specific lenses through which we can better evaluate the effects of transforming Downtown Brampton into an innovation-focused collaborative hub. These lenses include transportation, human capital and placemaking.

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## Strengths

**Transportation:** The existing transportation network (including buses and regional rail) has the capacity to support the development of an innovation hub. Brampton Transit and GO Transit services are readily available in the downtown and can be selected and adapted to serve the needs of riders accessing downtown Brampton.

**Human Capital:** The City of Brampton is Canada’s 9<sup>th</sup> largest City. It is also home to a significant, and growing number of new Canadians. The development of an innovation hub located in Downtown Brampton has the capacity to help bridge the gaps that currently separate skills and opportunities.

**Placemaking:** The City of Brampton has the potential to direct growth and investment to its downtown area. An innovation hub supported by a new

university campus (Ryerson-Sheridan) and a new landmark building (CEIC) would yield significant physical and functional improvements for the entire downtown core.

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## Weaknesses

**Transportation:** The existing transportation network does not currently support 2-way regional service. GO Train service at the Brampton Station is limited to rush-hour service only on the Orangeville/Brampton route and business hours service (6am to 5pm) on the Kitchener route.

**Human Capital:** Education levels in Brampton are lower than the provincial average.

**Placemaking:** The existing inventory of commercial real estate options in the downtown could diminish the potential for new spin-off activity and commercial re-activation of the core.

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## Opportunities

**Transportation:** The province has recently announced its intention to implement full-day GO Train service between Toronto and Waterloo within the next 10 years. The introduction of 15-minute regional express rail service (RER) gives Brampton direct, all day access to both downtown Toronto and Waterloo.

**Human Capital:** An innovation hub located in Downtown Brampton has the potential to improve the pathways to education, professional certification and skills development in a single, accessible location. New post secondary educational opportunities have the potential to retain and attract skills not otherwise possible in the current environment. Overall, repositioning downtown as an “Innovation Hub” has the potential to strengthen Brampton’s profile as a gateway opportunity for individuals and businesses looking to gain a competitive advantage in the Canadian market.

**Placemaking:** An innovation hub has the capacity to act as a catalyst for development and intensification of Downtown Brampton. It is reasonable to suggest that the introduction of students, visitors and jobs will collectively make investment conditions more attractive for a growing number of property owners and entrepreneurs.

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## Threats

**Transportation:** Changing investment priorities and uncertain timelines with respect to transit upgrades (i.e., RER service) have the potential to impact growth rates for future opportunities to expand activities within the downtown.

**Human Capital:** none.

**Placemaking:** none.

## 9.0 Summary of Key Findings

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A university campus in Downtown Brampton, combined with a 200,000-square foot Centre for Education, Innovation and Collaboration, is expected to have significant regional and local benefits. These include financial benefits such as increased economic activity, jobs and taxes, as well as social benefits such as delivering more affordable education, retaining young people and increasing the earning potential of residents. This section of the report summarizes the key findings.

## ECONOMIC IMPACTS

- A university campus with 5,000 students is expected to yield \$492.7 million in gross economic output and 2,275 full-time years of employment associated with the one-time construction of a \$241.1 million university campus. A CEIC of 200,000 square feet would cost somewhere in the order of \$114.5 million to build, yielding \$239.3 million in gross economic output and 1,025 full-time years of employment associated with the one-time construction.
- Ongoing operational expenditures of a new university campus are expected to yield gross economic output of \$260.6 million annually and support 1,650 jobs. Ongoing operational expenditures of a the CEIC are expected to yield gross economic output of \$47.6 million annually and support 275 jobs.
- Spin-off benefits associated with student and visitor spending connected to the university are expected to yield \$23.5 million in gross economic output annually and support 130 full-time jobs. Additionally, spin-off benefits associated with visitor spending connected to the CEIC are expected to yield \$30.0 million in gross economic output annually and support 180 full-time jobs.

## CAPITALIZING ON A NEW UNIVERSITY & CEIC

- The City of Brampton is one of the fastest growing municipalities in Ontario, particularly in the 18-24 age cohort most likely to attend post-secondary education.
- Brampton has a high percentage of households with income greater than \$100,000 and a low percentage of households with income less than \$30,000, a strong predictor of higher university participation rates in Brampton in future years.
- The growing share of Brampton residents with a university education is expected to increase university participation rates in the City in future years.
- A new university campus in Brampton provides an opportunity to deliver post-secondary education in a community that is currently underserved and anticipated to have strong growth in demand.
- Brampton also has favourable socio-economic characteristics that support increasing university participation rates.
- The university, and accompanying CEIC, will play an integral role in the exponential impact on the future of Brampton expected from the six gamechangers identified as part of Brampton Strategic Plan 2016 – 2018.

## ASSOCIATED BENEFITS TO THE CITY OF BRAMPTON

- In addition to economic impacts that can be quantified, the new university campus and the centre for education, innovation and culture will have significant, transformative impacts on the entire community.

- A new university provides an opportunity **to improve the lives of students and families**, including:
  - Providing more affordable education options close to home;
  - Reducing commuting time allowing for more time to be spent with friends and family;
  - Providing an opportunity to actively engage students and cultivate healthy town and gown initiatives that benefit a diverse array of residents in the City;
  - Supporting accreditation of foreign credentials, continuous adult advanced learning, and post-graduate career development and advancement programs; and,
  - Playing an important role in reversing “brain drain” consisting of young people migrating away to pursue their educational and career aspirations.
- The university campus and CEIC will provide **a welcome boost to the Brampton business community**, including:
  - Enhancing the vitality and viability of the downtown by providing opportunities for new retail/service commercial and office based business to support the university and CEIC;
  - Supporting the forecasted 74,000 net new jobs envisioned in the City with a diverse, creative and highly-educated future talent pool capable of meeting the changing needs of our society;
  - Encouraging industry clusters centred around research and development at the university and CEIC and through strategic partnerships between these new facilities and the business community;
  - Nourishing existing global connections, as well as cultivating new ones; and,
- Diversifying Brampton’s list of Top Employers by eventually supporting employment yields in-line with major employers such as Amazon, Gamma-Dyna Medical Labs, Brampton Transit and the Peel Memorial Centre for Integrated Health and Wellness in the City.
- The university campus and CEIC will **provide opportunities for Brampton residents to thrive at home**, including:
  - Contributing towards the City achieving the live-work ratio of 2:1 in the Official Plan through the creation of jobs related to the operation of these facilities, ancillary businesses that service students and visitors and jobs at start-ups that are incubated in the CEIC;
  - Creating jobs that will be available to youth, as well as skills that lead towards increased future employment opportunities and higher lifelong earning potential; and,
  - Providing opportunities to create new businesses through programs and facilities designed nurture and support young businesses through the early stages of their start-up life cycle

## LOCAL CONTRIBUTIONS TO UNIVERSITY EXPANSIONS

- The significant financial and non-financial benefits that accrue to municipalities that host university campuses has prompted some cities to provide financial contributions towards the construction of new facilities.
- Based on a review of available information, host municipalities have contributed between \$8 million and \$50 million to secure a university campus. This is equivalent to almost \$8,000 per student based on projected enrolment in the new facility.

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# Appendix A Economic Impact Approach

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## Our Approach

The quantitative economic impacts of a new university campus and CEIC in the City of Brampton have been estimated using the Statistics Canada Input-Output model, which simulates the flow of expenditures through the Canadian economy. The model provides a reliable measure of the following four economic impacts:

- Gross Economic Impact;
- Employment;
- Labour Income; and,
- Tax Revenues to the Three Levels of Government.

We have tested the economic impact of bringing a new university campus to the City of Brampton at an enrolment level of 5,000 full-time equivalent (FTE) students. The range of impacts include the one-time impacts related to the construction of the facility, the ongoing impacts related to the annual expenditures necessary to operate the university and ongoing impacts related to student and visitor spending.

## Key Assumptions

As shown in Figure A-1, we have also estimated the impact of a new university campus with 1,000 students, ultimately growing to 10,000 students and 20,000 students. We have assumed that the initial phase of a new university in Brampton would achieve an enrolment of 1,000 students, increasing to an enrolment of 5,000 students over a 10-year period. This is similar to enrolment growth at the University of Ontario Institute of Technology (UOIT), which expanded from an initial enrolment of 900 students in the 2003-2004 academic year to almost 9,000 students 10-years later in the 2013-2014 academic year. Similarly, over a 10-year period the Wilfrid Laurier University campus in Brantford has expanded from an initial enrolment of 40 students in 1999-2000 to 2,330 students in the 2009-2010 academic year.

Estimating the economic impact of a university campus in Brampton requires making a variety of assumptions with regards to student enrolment, the size of the facility and the number of staff required to operate the campus. The overriding assumptions regarding space and staff per student that have been used in our analysis are summarized in Figure A-1. The analysis assumes the campus will include all of the features of a typical university campus, including classrooms, lecture halls, labs, faculty and administrative offices, library and recreation facilities, student service facilities and residence space.

**Figure A-1: Overriding Assumptions on space and staff per student**

Timeline	Full-Time Enrolment (FTE)	Building Size (sq.ft.) <sup>1</sup>	Teaching Faculty (FTE) <sup>2</sup>	Administrative and Support Staff (FTE) <sup>3</sup>
Year 1	1,000	117,300	30	50
Year 10	5,000	582,400	170	250
Beyond Year 10	10,000	1,162,500	340	500
Beyond Year 10	20,000	2,325,000	670	1,000

<sup>1</sup> Based on 116 square feet per student.

<sup>2</sup> Based on 0.03 faculty per student.

<sup>3</sup> Based on 0.05 administrative staff per student.

Source: urbanMetrics inc.

## Economic Impact Methodology

The main steps in running an economic impact model are: (a) compiling the input spending data; (b) assembling the data to ensure all expenses are accounted for and divided into categories to ensure that the individual economic sectors are appropriately represented; (c) calibrating the model to the local economy using employment data; and (d) running the finalized version of the model.

The majority of the infrastructure investment and construction cost data considered in our analysis has been estimated based on information from various sources including the Council of Ontario Universities (COU), CAUBO,

the Hanscomb Yardsticks for Costing, Statistics Canada, the Canadian Millennium Scholarship Foundation and information from university websites, among other sources.

The data assembly stage of our analysis involves allocating initial capital expenditures to appropriate industry sectors using the 2007 North American Industry Classification System (NAICS). Estimates made with regards to the nature and scale of these expenditures are based on our related professional experience with similar projects.

The economic impacts of the initial investments and ongoing expenditures have been measured at the national and provincial level through the use of the Statistics Canada Input-Output Model which is based on Input-Output tables produced by Statistics Canada, which mirrors the structure of the economy through the depiction of transactions (sales and purchases) made among and between different industry sectors of the economy. The outputs have been adjusted to the regional and local level by urbanMetrics inc.

## Types of Impacts

The model from Statistics Canada considers the direct impact of spending, as well as the indirect and induced impacts that are spread more broadly across the Province and Canada, as these one-time and ongoing expenditures filter through the economy.

The basic principle of the model is the concept that each dollar of expenditure on goods and/or services purchased from a given industry sector circulates and re-circulates within the economy, thereby multiplying the effects of the original expenditure. This process is commonly referred to as the multiplier effect. An estimated multiplier for the one-time capital and ongoing

<sup>20</sup> For example, with respect to a single construction project, an initial expenditure would be made to pay for the design firm and contractor. The design team would then hire staff, purchase equipment and materials, such as computers, software, paper, etc. The construction company, would also hire labourers, pay for construction equipment and materials. The staff in turn would purchase goods and services from their wages to support their everyday living. The sum of all of

expenditures on a new university campus in Brampton has three distinct components:

- **Direct Impacts** represent the initial capital investments made to construct the campus, the ongoing expenditures necessary to run the university in addition to student and visitor spending related to the university. These expenditures include the purchase of labour, equipment, other infrastructure and related services;
- **Indirect Impacts** represent the subsequent purchases by suppliers required to produce the goods/services related to the original and ongoing investments in the university; and
- **Induced Impacts** result when workers employed in the sectors, stimulated by direct and indirect expenditures, spend portions of their incomes on consumer goods and services.

Direct, indirect and induced impacts are estimated in terms of the following measures:

- **Gross Output** – a measure of total sales throughout the economy in question, as a result of an initial and ongoing expenditures on goods and/or services produced by an industry<sup>20</sup>.
- **Employment** – total full-time, full-year jobs generated by direct, indirect and induced expenditures. For one-time capital and ongoing expenditures, such as those being analyzed, the employment figures produced by the model represent years of full-time employment. For example, one job identified by the model represents the equivalent of one person working full-time for the duration of one year<sup>21</sup>.

these expenditures would be the gross output. This, however is not the true impact on the economy as it involves double counting (e.g. the initial expenditure, in reality covered wages and salaries, equipment, etc. of the contractors it hired).

<sup>21</sup> These employment figures represent the total *full-time, full-year* jobs generated by direct expenditures, as well as the indirect and induced impacts that are spread more broadly

- **Labour Income** – total value of wages, salaries and benefits received by employees associated with direct, indirect and induced expenditure.
- **Government Revenues** – revenues accruing to federal, provincial and local jurisdictions as a result of direct, indirect and induced expenditures. Revenue categories include personal and corporate income tax, sales taxes (e.g. PST and GST), property taxes and other miscellaneous taxes, tariffs and fees.

**Multipliers** are expressed by the ratio of total impacts (direct, indirect and induced) to initial expenditures. For example, the gross output multiplier is calculated by dividing total gross output by the initial expenditure on the bundle of goods and/or services in question. The only exception is that of the employment multiplier, where total employment is divided by millions of dollars of expenditure.

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throughout the regional, provincial and national economies. For on-time capital expenditures, such as those analyzed in this study, these employment figures represent total years of full-time

employment (e.g., one job identified represents the equivalent of one person working full-time for the duration of one year).

## **Appendix B**   **Downtown University Economic Impact Analysis (Detailed Tables)**

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Figure B-1: FTE Jobs in Brampton by Industry, 5,000 FTE Student University

	Capital Expenditures	Operating Expenditures	Student and Visitor Spending
<b>Goods-producing Sector</b>	<b>1,165</b>	<b>130</b>	<b>10</b>
Agriculture	0	0	0
Forestry, Fishing, Mining, Oil and Gas	0	0	0
Utilities	5	5	0
Construction	1,025	90	5
Manufacturing	135	35	5
<b>Services-producing Sector</b>	<b>535</b>	<b>1,285</b>	<b>80</b>
Trade	190	115	25
Transportation and Warehousing	35	20	25
Finance, Insurance, Real estate and Leasing	35	25	5
Professional, Scientific and Technical Services	105	20	0
Business, Building and Other Support Services	55	60	5
Educational Services	25	975	0
Information, Culture and Recreation	15	15	5
Accommodation and Food Services	30	25	10
Other Services	35	25	5
Public Administration	10	5	0
<b>TOTAL</b>	<b>1,700</b>	<b>1,415</b>	<b>90</b>

Source: urbanMetrics inc., based on Statistics Canada Input-Output Model.

\* Includes direct, indirect and induced jobs.

**Figure B-2: Capital Expenditure (one-time) Impact, University with 1,000 FTE Students**

	City of Brampton	Region of Peel	Ontario	Canada
<b>Initial Expenditure</b>	<b>\$43,020,000</b>	<b>\$43,020,000</b>	<b>\$43,020,000</b>	<b>\$43,020,000</b>
<b>Impact: Gross Output</b>				
Direct	\$42,700,000	\$42,800,000	\$42,900,000	\$42,900,000
Indirect	\$15,700,000	\$18,900,000	\$21,200,000	\$26,100,000
Induced	\$11,200,000	\$13,000,000	\$15,000,000	\$18,800,000
<b>Total</b>	<b>\$69,600,000</b>	<b>\$74,600,000</b>	<b>\$79,100,000</b>	<b>\$87,900,000</b>
<i>Multiplier</i>	1.62	1.73	1.84	2.04
<b>Impact: Value Added</b>				
Direct	\$19,400,000	\$19,400,000	\$19,400,000	\$19,400,000
Indirect	\$8,000,000	\$9,700,000	\$10,900,000	\$13,300,000
Induced	\$6,700,000	\$7,800,000	\$8,900,000	\$10,900,000
<b>Total</b>	<b>\$34,200,000</b>	<b>\$36,900,000</b>	<b>\$39,200,000</b>	<b>\$43,600,000</b>
<i>Multiplier</i>	0.79	0.86	0.91	1.01
<b>Impact: Employment (Full-Time, Full-Year Employment)</b>				
Direct	200	200	200	200
Indirect	85	100	110	130
Induced	55	60	75	95
<b>Total</b>	<b>340</b>	<b>360</b>	<b>385</b>	<b>425</b>
<i>Multiplier</i>	7.92	8.35	8.89	9.87
<b>Impact: Labour Income</b>				
Direct	\$13,800,000	\$13,800,000	\$13,800,000	\$13,800,000
Indirect	\$5,500,000	\$6,500,000	\$7,300,000	\$8,700,000
Induced	\$3,200,000	\$3,500,000	\$4,300,000	\$5,300,000
<b>Total</b>	<b>\$22,500,000</b>	<b>\$23,900,000</b>	<b>\$25,400,000</b>	<b>\$27,800,000</b>
<b>Impact: Taxes</b>				
Federal	\$7,000,000	\$8,200,000	\$8,800,000	\$9,700,000
Provincial	\$4,900,000	\$5,600,000	\$6,300,000	\$6,900,000
Local	\$2,300,000	\$2,300,000	\$3,200,000	\$3,300,000
<b>Total</b>	<b>\$15,100,000</b>	<b>\$17,100,000</b>	<b>\$19,400,000</b>	<b>\$21,100,000</b>

Note: Dollars are rounded to the nearest \$100,000 and employment is rounded to the nearest 5 jobs.  
Source: urbanMetrics inc. based on Statistics Canada Input-Output Model.

**Figure B-3: Capital Expenditure (one-time) Impact, University with 10,000 FTE Students**

	City of Brampton	Region of Peel	Ontario	Canada
<b>Initial Expenditure</b>	<b>\$430,200,000</b>	<b>\$430,200,000</b>	<b>\$430,200,000</b>	<b>\$430,200,000</b>
<b>Impact: Gross Output</b>				
Direct	\$427,600,000	\$427,600,000	\$428,900,000	\$429,100,000
Indirect	\$156,800,000	\$189,000,000	\$212,200,000	\$261,400,000
Induced	\$111,900,000	\$129,900,000	\$150,000,000	\$188,400,000
<b>Total</b>	<b>\$696,300,000</b>	<b>\$746,500,000</b>	<b>\$791,100,000</b>	<b>\$878,900,000</b>
<i>Multiplier</i>	1.62	1.74	1.84	2.04
<b>Impact: Value Added</b>				
Direct	\$194,000,000	\$194,100,000	\$194,100,000	\$194,200,000
Indirect	\$80,100,000	\$97,100,000	\$109,600,000	\$132,900,000
Induced	\$67,600,000	\$77,600,000	\$89,100,000	\$109,200,000
<b>Total</b>	<b>\$341,700,000</b>	<b>\$368,700,000</b>	<b>\$392,700,000</b>	<b>\$436,300,000</b>
<i>Multiplier</i>	0.79	0.86	0.91	1.01
<b>Impact: Employment (Full-Time, Full-Year Employment)</b>				
Direct	2,020	2,020	2,020	2,020
Indirect	815	975	1,085	1,295
Induced	550	625	745	925
<b>Total</b>	<b>3,390</b>	<b>3,620</b>	<b>3,855</b>	<b>4,240</b>
<i>Multiplier</i>	7.88	8.42	8.96	9.86
<b>Impact: Labour Income</b>				
Direct	\$138,300,000	\$138,200,000	\$138,300,000	\$138,300,000
Indirect	\$54,700,000	\$65,300,000	\$73,200,000	\$86,400,000
Induced	\$31,600,000	\$35,700,000	\$42,800,000	\$52,800,000
<b>Total</b>	<b>\$224,600,000</b>	<b>\$239,300,000</b>	<b>\$254,200,000</b>	<b>\$277,600,000</b>
<b>Impact: Taxes</b>				
Federal	\$69,600,000	\$82,200,000	\$88,200,000	\$97,200,000
Provincial	\$49,600,000	\$56,200,000	\$63,200,000	\$68,800,000
Local	\$7,700,000	\$7,700,000	\$16,500,000	\$17,700,000
<b>Total</b>	<b>\$135,400,000</b>	<b>\$156,000,000</b>	<b>\$178,700,000</b>	<b>\$195,500,000</b>

Note: Dollars are rounded to the nearest \$100,000 and employment is rounded to the nearest 5 jobs.  
Source: urbanMetrics inc. based on Statistics Canada Input-Output Model.

**Figure B-4: Capital Expenditure (one-time) Impact, University with 20,000 FTE Students**

	City of Brampton	Region of Peel	Ontario	Canada
<b>Initial Expenditure</b>	<b>\$860,400,000</b>	<b>\$860,400,000</b>	<b>\$860,400,000</b>	<b>\$860,400,000</b>
<b>Impact: Gross Output</b>				
Direct	\$855,200,000	\$855,200,000	\$857,800,000	\$858,200,000
Indirect	\$313,600,000	\$377,900,000	\$424,400,000	\$523,000,000
Induced	\$223,700,000	\$259,900,000	\$300,100,000	\$376,600,000
<b>Total</b>	<b>\$1,392,500,000</b>	<b>\$1,493,000,000</b>	<b>\$1,582,300,000</b>	<b>\$1,757,800,000</b>
<i>Multiplier</i>	1.62	1.74	1.84	2.04
<b>Impact: Value Added</b>				
Direct	\$388,200,000	\$388,200,000	\$388,200,000	\$388,400,000
Indirect	\$160,300,000	\$194,200,000	\$219,100,000	\$265,700,000
Induced	\$135,200,000	\$155,200,000	\$178,100,000	\$218,300,000
<b>Total</b>	<b>\$683,700,000</b>	<b>\$737,600,000</b>	<b>\$785,400,000</b>	<b>\$872,400,000</b>
<i>Multiplier</i>	0.79	0.86	0.91	1.01
<b>Impact: Employment (Full-Time, Full-Year Employment)</b>				
Direct	4,040	4,045	4,040	4,045
Indirect	1,635	1,950	2,180	2,590
Induced	1,105	1,250	1,490	1,850
<b>Total</b>	<b>6,780</b>	<b>7,245</b>	<b>7,710</b>	<b>8,485</b>
<i>Multiplier</i>	7.88	8.42	8.96	9.86
<b>Impact: Labour Income</b>				
Direct	\$276,400,000	\$276,400,000	\$276,500,000	\$276,600,000
Indirect	\$109,500,000	\$130,600,000	\$146,400,000	\$173,000,000
Induced	\$63,300,000	\$71,600,000	\$85,600,000	\$105,600,000
<b>Total</b>	<b>\$449,200,000</b>	<b>\$478,600,000</b>	<b>\$508,400,000</b>	<b>\$555,100,000</b>
<b>Impact: Taxes</b>				
Federal	\$139,300,000	\$164,500,000	\$176,300,000	\$194,300,000
Provincial	\$99,000,000	\$112,300,000	\$126,400,000	\$137,600,000
Local	\$7,700,000	\$7,700,000	\$25,300,000	\$27,600,000
<b>Total</b>	<b>\$263,000,000</b>	<b>\$304,200,000</b>	<b>\$349,600,000</b>	<b>\$383,200,000</b>

Note: Dollars are rounded to the nearest \$100,000 and employment is rounded to the nearest 5 jobs. Source: urbanMetrics inc. based on Statistics Canada Input-Output Model.



**Figure B-5: Operating Expenditure (ongoing) Impact, University with 1,000 FTE Students**

	City of Brampton	Region of Peel	Ontario	Canada
<b>Ongoing Expenditure</b>	<b>\$26,900,000</b>	<b>\$26,900,000</b>	<b>\$26,900,000</b>	<b>\$26,900,000</b>
<b>Impact: Gross Output</b>				
Direct	\$25,900,000	\$25,900,000	\$26,300,000	\$26,400,000
Indirect	\$6,100,000	\$7,000,000	\$7,500,000	\$8,900,000
Induced	\$10,400,000	\$12,000,000	\$13,900,000	\$16,900,000
<b>Total</b>	<b>\$42,400,000</b>	<b>\$44,900,000</b>	<b>\$47,700,000</b>	<b>\$52,200,000</b>
<i>Multiplier</i>	<i>1.58</i>	<i>1.67</i>	<i>1.77</i>	<i>1.94</i>
<b>Impact: Value Added</b>				
Direct	\$19,200,000	\$19,200,000	\$19,200,000	\$19,200,000
Indirect	\$3,200,000	\$3,600,000	\$4,300,000	\$4,900,000
Induced	\$6,300,000	\$7,300,000	\$8,300,000	\$9,800,000
<b>Total</b>	<b>\$28,700,000</b>	<b>\$30,100,000</b>	<b>\$31,800,000</b>	<b>\$33,900,000</b>
<i>Multiplier</i>	<i>1.07</i>	<i>1.12</i>	<i>1.18</i>	<i>1.26</i>
<b>Impact: Employment (Full-Time, Full-Year Employment)</b>				
Direct	195	195	195	195
Indirect	40	45	50	55
Induced	50	55	65	80
<b>Total</b>	<b>285</b>	<b>295</b>	<b>310</b>	<b>330</b>
<i>Multiplier</i>	<i>11.00</i>	<i>11.39</i>	<i>11.97</i>	<i>12.74</i>
<b>Impact: Labour Income</b>				
Direct	\$16,800,000	\$16,800,000	\$16,800,000	\$16,800,000
Indirect	\$2,500,000	\$2,800,000	\$3,100,000	\$3,500,000
Induced	\$2,900,000	\$3,300,000	\$3,900,000	\$4,800,000
<b>Total</b>	<b>\$22,200,000</b>	<b>\$22,900,000</b>	<b>\$23,800,000</b>	<b>\$25,100,000</b>
<b>Impact: Taxes</b>				
Federal	\$6,900,000	\$7,800,000	\$8,200,000	\$8,700,000
Provincial	\$3,700,000	\$4,100,000	\$4,500,000	\$4,700,000
Local	\$1,700,000	\$3,200,000	\$800,000	\$800,000
<b>Total</b>	<b>\$12,300,000</b>	<b>\$15,100,000</b>	<b>\$13,500,000</b>	<b>\$14,200,000</b>

Note: Dollars are rounded to the nearest \$100,000 and employment is rounded to the nearest 5 jobs.  
Source: urbanMetrics inc., based on Statistics Canada Input-Output Model.

**Figure B-6: Operating Expenditure (ongoing) Impact, University with 10,000 FTE Students**

	City of Brampton	Region of Peel	Ontario	Canada
<b>Ongoing Expenditure</b>	<b>\$268,600,000</b>	<b>\$268,600,000</b>	<b>\$268,600,000</b>	<b>\$268,600,000</b>
<b>Impact: Gross Output</b>				
Direct	\$258,100,000	\$258,100,000	\$262,800,000	\$263,400,000
Indirect	\$60,900,000	\$69,400,000	\$74,400,000	\$88,800,000
Induced	\$104,000,000	\$120,700,000	\$139,300,000	\$169,000,000
<b>Total</b>	<b>\$423,000,000</b>	<b>\$448,200,000</b>	<b>\$476,500,000</b>	<b>\$521,200,000</b>
<i>Multiplier</i>	<i>1.57</i>	<i>1.67</i>	<i>1.77</i>	<i>1.94</i>
<b>Impact: Value Added</b>				
Direct	\$192,000,000	\$192,000,000	\$192,000,000	\$192,300,000
Indirect	\$32,100,000	\$36,600,000	\$42,100,000	\$49,300,000
Induced	\$62,900,000	\$72,200,000	\$82,800,000	\$98,000,000
<b>Total</b>	<b>\$287,000,000</b>	<b>\$300,800,000</b>	<b>\$316,900,000</b>	<b>\$339,600,000</b>
<i>Multiplier</i>	<i>1.07</i>	<i>1.12</i>	<i>1.18</i>	<i>1.26</i>
<b>Impact: Employment (Full-Time, Full-Year Employment)</b>				
Direct	1,935	1,935	1,935	1,940
Indirect	400	450	500	555
Induced	495	560	670	800
<b>Total</b>	<b>2,830</b>	<b>2,945</b>	<b>3,105</b>	<b>3,295</b>
<i>Multiplier</i>	<i>10.93</i>	<i>11.37</i>	<i>11.99</i>	<i>12.72</i>
<b>Impact: Labour Income</b>				
Direct	\$167,500,000	\$167,500,000	\$167,600,000	\$167,800,000
Indirect	\$24,900,000	\$28,100,000	\$31,300,000	\$35,000,000
Induced	\$29,500,000	\$33,300,000	\$39,700,000	\$47,400,000
<b>Total</b>	<b>\$221,900,000</b>	<b>\$228,900,000</b>	<b>\$238,600,000</b>	<b>\$250,200,000</b>
<b>Impact: Taxes</b>				
Federal	\$69,800,000	\$78,300,000	\$82,300,000	\$86,700,000
Provincial	\$37,300,000	\$41,400,000	\$44,100,000	\$47,000,000
Local	\$1,700,000	\$3,200,000	\$8,200,000	\$8,700,000
<b>Total</b>	<b>\$108,800,000</b>	<b>\$122,900,000</b>	<b>\$134,600,000</b>	<b>\$142,400,000</b>

Note: Dollars are rounded to the nearest \$100,000 and employment is rounded to the nearest 5 jobs.  
Source: urbanMetrics inc., based on Statistics Canada Input-Output Model.

**Figure B-7: Operating Expenditure (ongoing) Impact, University  
with 20,000 FTE Students**

	City of Brampton	Region of Peel	Ontario	Canada
<b>Ongoing Expenditure</b>	<b>\$537,400,000</b>	<b>\$537,400,000</b>	<b>\$537,400,000</b>	<b>\$537,400,000</b>
<b>Impact: Gross Output</b>				
Direct	\$516,300,000	\$516,300,000	\$525,700,000	\$526,900,000
Indirect	\$121,700,000	\$138,800,000	\$148,700,000	\$177,500,000
Induced	\$208,100,000	\$241,500,000	\$278,700,000	\$338,000,000
<b>Total</b>	<b>\$846,100,000</b>	<b>\$896,600,000</b>	<b>\$953,100,000</b>	<b>\$1,042,400,000</b>
<i>Multiplier</i>	<i>1.57</i>	<i>1.67</i>	<i>1.77</i>	<i>1.94</i>
<b>Impact: Value Added</b>				
Direct	\$384,000,000	\$384,000,000	\$384,000,000	\$384,600,000
Indirect	\$64,400,000	\$73,200,000	\$84,300,000	\$98,500,000
Induced	\$125,900,000	\$144,400,000	\$165,600,000	\$195,900,000
<b>Total</b>	<b>\$574,300,000</b>	<b>\$601,600,000</b>	<b>\$633,900,000</b>	<b>\$679,000,000</b>
<i>Multiplier</i>	<i>1.07</i>	<i>1.12</i>	<i>1.18</i>	<i>1.26</i>
<b>Impact: Employment (Full-Time, Full-Year Employment)</b>				
Direct	3,870	3,870	3,870	3,875
Indirect	795	895	1,000	1,115
Induced	990	1,120	1,335	1,595
<b>Total</b>	<b>5,655</b>	<b>5,885</b>	<b>6,205</b>	<b>6,585</b>
<i>Multiplier</i>	<i>10.91</i>	<i>11.36</i>	<i>11.98</i>	<i>12.71</i>
<b>Impact: Labour Income</b>				
Direct	\$335,000,000	\$335,000,000	\$335,100,000	\$335,600,000
Indirect	\$49,900,000	\$56,200,000	\$62,600,000	\$69,900,000
Induced	\$58,900,000	\$66,700,000	\$79,600,000	\$94,900,000
<b>Total</b>	<b>\$443,800,000</b>	<b>\$457,900,000</b>	<b>\$477,300,000</b>	<b>\$500,400,000</b>
<b>Impact: Taxes</b>				
Federal	\$139,700,000	\$156,600,000	\$164,500,000	\$173,500,000
Provincial	\$74,700,000	\$82,700,000	\$88,300,000	\$94,000,000
Local	\$1,700,000	\$3,200,000	\$16,400,000	\$17,500,000
<b>Total</b>	<b>\$216,100,000</b>	<b>\$242,500,000</b>	<b>\$269,200,000</b>	<b>\$285,000,000</b>

Note: Dollars are rounded to the nearest \$100,000 and employment is rounded to the nearest 5 jobs.

Source: urbanMetrics inc., based on Statistics Canada Input-Output Model.

**Figure B-8: Student & Visitor Spending (ongoing) Impact, University with 1,000 FTE Students**

	City of Brampton	Region of Peel	Ontario	Canada
<b>Ongoing Expenditure</b>	<b>\$2,900,000</b>	<b>\$2,900,000</b>	<b>\$2,900,000</b>	<b>\$2,900,000</b>
<b>Impact: Gross Output</b>				
Direct	\$2,100,000	\$2,100,000	\$2,100,000	\$2,300,000
Indirect	\$800,000	\$900,000	\$1,000,000	\$1,500,000
Induced	\$500,000	\$600,000	\$700,000	\$900,000
<b>Total</b>	<b>\$3,400,000</b>	<b>\$3,600,000</b>	<b>\$3,800,000</b>	<b>\$4,700,000</b>
<i>Multiplier</i>	<i>1.18</i>	<i>1.25</i>	<i>1.32</i>	<i>1.61</i>
<b>Impact: Value Added</b>				
Direct	\$1,200,000	\$1,200,000	\$1,200,000	\$1,300,000
Indirect	\$400,000	\$500,000	\$500,000	\$700,000
Induced	\$300,000	\$400,000	\$400,000	\$500,000
<b>Total</b>	<b>\$1,900,000</b>	<b>\$2,100,000</b>	<b>\$2,100,000</b>	<b>\$2,500,000</b>
<i>Multiplier</i>	<i>0.68</i>	<i>0.75</i>	<i>0.75</i>	<i>0.89</i>
<b>Impact: Employment (Full-Time, Full-Year Employment)</b>				
Direct	10	10	10	15
Indirect	5	5	5	5
Induced	5	5	5	5
<b>Total</b>	<b>20</b>	<b>20</b>	<b>20</b>	<b>25</b>
<i>Multiplier</i>	<i>7.14</i>	<i>7.14</i>	<i>7.14</i>	<i>8.93</i>
<b>Impact: Labour Income</b>				
Direct	\$700,000	\$700,000	\$700,000	\$800,000
Indirect	\$200,000	\$300,000	\$300,000	\$400,000
Induced	\$100,000	\$200,000	\$200,000	\$300,000
<b>Total</b>	<b>\$1,000,000</b>	<b>\$1,200,000</b>	<b>\$1,200,000</b>	<b>\$1,500,000</b>
<b>Impact: Taxes</b>				
Federal	\$400,000	\$500,000	\$500,000	\$600,000
Provincial	\$300,000	\$400,000	\$400,000	\$500,000
Local	\$100,000	\$100,000	\$200,000	\$200,000
<b>Total</b>	<b>\$800,000</b>	<b>\$1,000,000</b>	<b>\$1,100,000</b>	<b>\$1,300,000</b>

Note: Dollars are rounded to the nearest \$100,000 and employment is rounded to the nearest 5 jobs.  
Source: urbanMetrics inc. based on Statistics Canada Input-Output Model.

**Figure B-9: Student & Visitor Spending (ongoing) Impact, University with 10,000 FTE Students**

	City of Brampton	Region of Peel	Ontario	Canada
<b>Ongoing Expenditure</b>	<b>\$29,600,000</b>	<b>\$29,600,000</b>	<b>\$29,600,000</b>	<b>\$29,600,000</b>
<b>Impact: Gross Output</b>				
Direct	\$20,600,000	\$20,600,000	\$20,600,000	\$22,700,000
Indirect	\$7,800,000	\$9,300,000	\$10,400,000	\$14,500,000
Induced	\$5,400,000	\$6,200,000	\$7,200,000	\$9,700,000
<b>Total</b>	<b>\$33,800,000</b>	<b>\$36,100,000</b>	<b>\$38,200,000</b>	<b>\$46,900,000</b>
<i>Multiplier</i>	<i>1.14</i>	<i>1.22</i>	<i>1.29</i>	<i>1.59</i>
<b>Impact: Value Added</b>				
Direct	\$12,800,000	\$12,800,000	\$12,800,000	\$13,900,000
Indirect	\$3,700,000	\$4,700,000	\$5,500,000	\$7,600,000
Induced	\$3,200,000	\$3,700,000	\$4,300,000	\$5,600,000
<b>Total</b>	<b>\$19,700,000</b>	<b>\$21,200,000</b>	<b>\$22,600,000</b>	<b>\$27,100,000</b>
<i>Multiplier</i>	<i>0.67</i>	<i>0.72</i>	<i>0.76</i>	<i>0.92</i>
<b>Impact: Employment (Full-Time, Full-Year Employment)</b>				
Direct	125	125	125	135
Indirect	40	45	55	70
Induced	25	30	35	45
<b>Total</b>	<b>190</b>	<b>200</b>	<b>215</b>	<b>250</b>
<i>Multiplier</i>	<i>6.67</i>	<i>7.02</i>	<i>7.54</i>	<i>8.77</i>
<b>Impact: Labour Income</b>				
Direct	\$7,400,000	\$7,400,000	\$7,500,000	\$8,100,000
Indirect	\$2,500,000	\$3,000,000	\$3,500,000	\$4,600,000
Induced	\$1,500,000	\$1,700,000	\$2,100,000	\$2,700,000
<b>Total</b>	<b>\$11,400,000</b>	<b>\$12,100,000</b>	<b>\$13,100,000</b>	<b>\$15,400,000</b>
<b>Impact: Taxes</b>				
Federal	\$4,100,000	\$5,100,000	\$5,500,000	\$6,400,000
Provincial	\$3,100,000	\$3,600,000	\$4,300,000	\$4,900,000
Local	\$900,000	\$1,200,000	\$1,700,000	\$1,800,000
<b>Total</b>	<b>\$8,100,000</b>	<b>\$9,900,000</b>	<b>\$11,500,000</b>	<b>\$13,100,000</b>

Note: Dollars are rounded to the nearest \$100,000 and employment is rounded to the nearest 5 jobs.  
Source: urbanMetrics inc. based on Statistics Canada Input-Output Model.

**Figure B-10: Student & Visitor Spending (ongoing) Impact, University with 20,000 FTE Students**

	City of Brampton	Region of Peel	Ontario	Canada
<b>Ongoing Expenditure</b>	<b>\$59,000,000</b>	<b>\$59,000,000</b>	<b>\$59,000,000</b>	<b>\$59,000,000</b>
<b>Impact: Gross Output</b>				
Direct	\$41,100,000	\$41,100,000	\$41,100,000	\$45,400,000
Indirect	\$15,600,000	\$18,600,000	\$20,600,000	\$29,000,000
Induced	\$10,700,000	\$12,400,000	\$14,400,000	\$19,400,000
<b>Total</b>	<b>\$67,400,000</b>	<b>\$72,100,000</b>	<b>\$76,100,000</b>	<b>\$93,800,000</b>
<i>Multiplier</i>	<i>1.14</i>	<i>1.22</i>	<i>1.29</i>	<i>1.59</i>
<b>Impact: Value Added</b>				
Direct	\$25,500,000	\$25,500,000	\$25,500,000	\$27,800,000
Indirect	\$7,600,000	\$9,400,000	\$11,100,000	\$15,100,000
Induced	\$6,400,000	\$7,400,000	\$8,500,000	\$11,200,000
<b>Total</b>	<b>\$39,500,000</b>	<b>\$42,300,000</b>	<b>\$45,100,000</b>	<b>\$54,100,000</b>
<i>Multiplier</i>	<i>0.67</i>	<i>0.72</i>	<i>0.76</i>	<i>0.92</i>
<b>Impact: Employment (Full-Time, Full-Year Employment)</b>				
Direct	250	250	250	270
Indirect	75	90	110	140
Induced	50	55	70	90
<b>Total</b>	<b>375</b>	<b>395</b>	<b>430</b>	<b>500</b>
<i>Multiplier</i>	<i>6.59</i>	<i>6.94</i>	<i>7.56</i>	<i>8.79</i>
<b>Impact: Labour Income</b>				
Direct	\$14,700,000	\$14,700,000	\$14,800,000	\$16,200,000
Indirect	\$5,100,000	\$6,000,000	\$7,100,000	\$9,000,000
Induced	\$3,000,000	\$3,400,000	\$4,000,000	\$5,400,000
<b>Total</b>	<b>\$22,800,000</b>	<b>\$24,100,000</b>	<b>\$25,900,000</b>	<b>\$30,600,000</b>
<b>Impact: Taxes</b>				
Federal	\$8,200,000	\$10,200,000	\$11,100,000	\$12,900,000
Provincial	\$6,200,000	\$7,300,000	\$8,500,000	\$9,600,000
Local	\$1,900,000	\$2,600,000	\$3,300,000	\$3,500,000
<b>Total</b>	<b>\$16,300,000</b>	<b>\$20,100,000</b>	<b>\$22,900,000</b>	<b>\$26,000,000</b>

Note: Dollars are rounded to the nearest \$100,000 and employment is rounded to the nearest 5 jobs.

Source: urbanMetrics inc. based on Statistics Canada Input-Output Model.

## **Appendix C**   **CEIC Economic Impact Analysis (Detailed Tables)**

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Figure C-1: FTE Jobs in Brampton by Industry, 200,000 Square Foot CEIC

	Capital Expenditures	Operating Expenditures	Student and Visitor Spending
<b>Goods-producing Sector</b>	<b>560</b>	<b>10</b>	<b>10</b>
Agriculture	5	0	0
Forestry, Fishing, Mining, Oil and Gas	0	0	0
Utilities	0	0	0
Construction	495	5	5
Manufacturing	60	5	5
<b>Services-producing Sector</b>	<b>265</b>	<b>225</b>	<b>125</b>
Trade	35	5	5
Transportation and Warehousing	90	15	55
Finance, Insurance, Real estate and Leasing	15	5	5
Professional, Scientific and Technical Services	35	5	0
Business, Building and Other Support Services	30	10	5
Educational Services	10	5	0
Information, Culture and Recreation	10	0	10
Accommodation and Food Services	20	5	40
Other Services	15	5	5
Public Administration	5	170	0
<b>TOTAL</b>	<b>825</b>	<b>235</b>	<b>135</b>

Source: urbanMetrics inc. based on Statistics Canada Input-Output Model.

\* Includes direct, indirect and induced jobs.

**Figure C-2: Capital Expenditure (one-time) Impact, 200,000 Square Foot CEIC**

	City of Brampton	Region of Peel	Ontario	Canada
<b>Initial Expenditure</b>	<b>\$114,500,000</b>	<b>\$114,500,000</b>	<b>\$114,500,000</b>	<b>\$114,500,000</b>
<b>Impact: Gross Output</b>				
Direct	\$114,500,000	\$114,500,000	\$114,500,000	\$114,500,000
Indirect	\$42,600,000	\$49,700,000	\$56,700,000	\$69,700,000
Induced	\$33,200,000	\$37,500,000	\$43,500,000	\$55,100,000
<b>Total</b>	<b>\$190,300,000</b>	<b>\$201,700,000</b>	<b>\$214,700,000</b>	<b>\$239,300,000</b>
<i>Multiplier</i>	1.66	1.76	1.88	2.09
<b>Impact: Value Added</b>				
Direct	\$53,500,000	\$53,500,000	\$53,500,000	\$53,500,000
Indirect	\$21,600,000	\$25,200,000	\$28,900,000	\$35,100,000
Induced	\$19,800,000	\$22,100,000	\$25,600,000	\$31,600,000
<b>Total</b>	<b>\$94,900,000</b>	<b>\$100,800,000</b>	<b>\$108,000,000</b>	<b>\$120,200,000</b>
<i>Multiplier</i>	0.83	0.88	0.94	1.05
<b>Impact: Employment (Full-Time, Full-Year Employment)</b>				
Direct	485	485	485	485
Indirect	205	230	260	310
Induced	140	155	185	230
<b>Total</b>	<b>830</b>	<b>870</b>	<b>930</b>	<b>1,025</b>
<i>Multiplier</i>	7.25	7.60	8.12	8.95
<b>Impact: Labour Income</b>				
Direct	\$46,200,000	\$46,200,000	\$46,200,000	\$46,200,000
Indirect	\$15,300,000	\$17,200,000	\$19,500,000	\$23,200,000
Induced	\$9,200,000	\$10,000,000	\$11,900,000	\$14,900,000
<b>Total</b>	<b>\$70,700,000</b>	<b>\$73,400,000</b>	<b>\$77,600,000</b>	<b>\$84,300,000</b>
<b>Impact: Taxes</b>				
Federal	\$19,900,000	\$23,300,000	\$25,000,000	\$29,300,000
Provincial	\$11,500,000	\$13,000,000	\$14,600,000	\$17,200,000
Local	\$5,300,000	\$6,700,000	\$8,000,000	\$8,900,000
<b>Total</b>	<b>\$36,700,000</b>	<b>\$43,000,000</b>	<b>\$47,600,000</b>	<b>\$55,400,000</b>

Note: Dollars are rounded to the nearest \$100,000 and employment is rounded to the nearest 5 jobs.  
Source: urbanMetrics inc. based on Statistics Canada Input-Output Model.

**Figure C-3: Operating Expenditure (ongoing) Impact, 200,000 Square Foot CEIC**

	City of Brampton	Region of Peel	Ontario	Canada
<b>Ongoing Expenditure</b>	<b>\$22,300,000</b>	<b>\$22,300,000</b>	<b>\$22,300,000</b>	<b>\$22,300,000</b>
<b>Impact: Gross Output</b>				
Direct	\$22,900,000	\$22,900,000	\$22,300,000	\$22,300,000
Indirect	\$6,700,000	\$7,500,000	\$9,800,000	\$12,100,000
Induced	\$8,100,000	\$9,200,000	\$10,600,000	\$13,200,000
<b>Total</b>	<b>\$37,700,000</b>	<b>\$39,600,000</b>	<b>\$42,700,000</b>	<b>\$47,600,000</b>
<i>Multiplier</i>	1.69	1.78	1.91	2.13
<b>Impact: Value Added</b>				
Direct	\$13,100,000	\$13,100,000	\$13,100,000	\$13,100,000
Indirect	\$4,000,000	\$4,400,000	\$5,500,000	\$6,700,000
Induced	\$4,800,000	\$5,400,000	\$6,200,000	\$7,600,000
<b>Total</b>	<b>\$21,900,000</b>	<b>\$22,900,000</b>	<b>\$24,800,000</b>	<b>\$27,400,000</b>
<i>Multiplier</i>	0.98	1.03	1.11	1.23
<b>Impact: Employment (Full-Time, Full-Year Employment)</b>				
Direct	165	165	165	165
Indirect	35	40	45	55
Induced	35	40	45	55
<b>Total</b>	<b>235</b>	<b>245</b>	<b>255</b>	<b>275</b>
<i>Multiplier</i>	10.54	10.99	11.43	12.33
<b>Impact: Labour Income</b>				
Direct	\$13,100,000	\$13,100,000	\$13,100,000	\$13,100,000
Indirect	\$2,700,000	\$2,900,000	\$3,500,000	\$4,000,000
Induced	\$2,200,000	\$2,400,000	\$2,900,000	\$3,600,000
<b>Total</b>	<b>\$18,000,000</b>	<b>\$18,400,000</b>	<b>\$19,500,000</b>	<b>\$20,700,000</b>
<b>Impact: Taxes</b>				
Federal	\$5,300,000	\$6,200,000	\$6,600,000	\$7,000,000
Provincial	\$2,900,000	\$3,300,000	\$3,600,000	\$3,900,000
Local	\$500,000	\$600,000	\$700,000	\$800,000
<b>Total</b>	<b>\$8,700,000</b>	<b>\$10,100,000</b>	<b>\$10,900,000</b>	<b>\$11,700,000</b>

Note: Dollars are rounded to the nearest \$100,000 and employment is rounded to the nearest 5 jobs.  
Source: urbanMetrics inc. based on Statistics Canada Input-Output Model.

**Figure C-4: Visitor Spending (ongoing) Impact, 200,000 Square foot CEIC**

	City of Brampton	Region of Peel	Ontario	Canada
<b>Ongoing Expenditure</b>	<b>\$18,400,000</b>	<b>\$18,400,000</b>	<b>\$18,400,000</b>	<b>\$18,400,000</b>
<b>Impact: Gross Output</b>				
Direct	\$11,900,000	\$11,900,000	\$11,900,000	\$13,400,000
Indirect	\$4,900,000	\$5,700,000	\$6,400,000	\$9,900,000
Induced	\$3,700,000	\$4,200,000	\$4,800,000	\$6,700,000
<b>Total</b>	<b>\$20,500,000</b>	<b>\$21,800,000</b>	<b>\$23,100,000</b>	<b>\$30,000,000</b>
<i>Multiplier</i>	1.11	1.18	1.26	1.63
<b>Impact: Value Added</b>				
Direct	\$6,700,000	\$6,700,000	\$6,700,000	\$7,500,000
Indirect	\$2,300,000	\$2,800,000	\$3,300,000	\$5,000,000
Induced	\$2,200,000	\$2,400,000	\$2,800,000	\$3,800,000
<b>Total</b>	<b>\$11,200,000</b>	<b>\$11,900,000</b>	<b>\$12,800,000</b>	<b>\$16,300,000</b>
<i>Multiplier</i>	0.61	0.65	0.70	0.89
<b>Impact: Employment (Full-Time, Full-Year Employment)</b>				
Direct	95	95	95	110
Indirect	20	25	30	40
Induced	15	15	20	30
<b>Total</b>	<b>130</b>	<b>135</b>	<b>145</b>	<b>180</b>
<i>Multiplier</i>	7.07	7.34	7.88	9.78
<b>Impact: Labour Income</b>				
Direct	\$5,300,000	\$5,300,000	\$5,300,000	\$5,800,000
Indirect	\$1,600,000	\$1,800,000	\$2,000,000	\$2,800,000
Induced	\$1,000,000	\$1,100,000	\$1,300,000	\$1,800,000
<b>Total</b>	<b>\$7,900,000</b>	<b>\$8,200,000</b>	<b>\$8,600,000</b>	<b>\$10,400,000</b>
<b>Impact: Taxes</b>				
Federal	\$2,700,000	\$3,600,000	\$3,900,000	\$4,600,000
Provincial	\$2,000,000	\$2,400,000	\$2,900,000	\$3,300,000
Local	\$300,000	\$400,000	\$500,000	\$600,000
<b>Total</b>	<b>\$5,000,000</b>	<b>\$6,400,000</b>	<b>\$7,300,000</b>	<b>\$8,500,000</b>

Note: Dollars are rounded to the nearest \$100,000 and employment is rounded to the nearest 5 jobs.

Source: urbanMetrics inc. based on Statistics Canada Input-Output Model.



## **Appendix D** Local Contributions to University Expansions in Ontario

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**Figure D-1: Detailed Financial and Non-Financial Support from Host Municipalities**

Contributing Municipality	University	Type of Campus	Contribution (millions)	Construction Cost (millions)	Share of Cost	Enrolment Capacity <sup>1</sup>	Per Enrolment
Orillia and Simcoe County	Lakehead	Suburban	\$10.5	\$50.0	21%	1,500	\$7,000
Milton	Laurier (Proposed)	Suburban	\$50.0	n.a.	n.a.	2,500	\$20,000
Hamilton	McMaster <sup>2</sup>	Urban	\$20.0	\$84.6	24%	4,000	\$5,000
Stratford	Waterloo	Urban	\$10.0 <sup>3</sup>	\$25.0	40%	600	\$16,667
Burlington and Halton Region	McMaster	Suburban	\$10.0	\$29.8	34%	500	\$20,000
Barrie	Laurentian (Proposed)	Urban	\$14.0	\$60.0	23%	3,100	\$4,516
Mississauga <sup>4</sup>	University of Toronto	Urban	\$10.0	\$35.0	29%	2,300	\$4,348
Cambridge <sup>5</sup>	Waterloo	Urban	\$8.0	\$24.0	33%	360	\$22,222
Markham and York Region	York	Urban	\$25.0 <sup>6,7</sup>	n.a.	n.a.	5,000	\$5,000
<b>AVERAGE</b>					<b>27%</b>		<b>\$7,900</b>

<sup>1</sup> FTE enrolment capacity at proposed campus.

<sup>2</sup> Contribution towards the David Braley Health Sciences Centre.

<sup>3</sup> Contributed up to 8 acres of land in the downtown core. Value of land was not identified.

<sup>4</sup> Contribution towards University of Toronto Mississauga's Innovation Complex.

<sup>5</sup> Contribution is only related to the expansion of the campus. The City of Cambridge contributed \$7.5 million to the construction of the original campus in 2001.

<sup>6</sup> The City of Markham has dedicated 5 acres of land in Markham Centre. Value was not identified.

<sup>7</sup> Forms of funding yet to be determined. Excludes land costs in Markham Centre.

Source: urbanMetrics inc. based on various sources

## **Appendix E**    **North American Industry Classification System (NAICS)**

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The following appendix provides a brief overview of the NAICS 2007 classification system and the two-digit level industry classifications, as described by Statistics Canada.

The North American Industry Classification System (NAICS) is an industry classification system developed by the statistical agencies of Canada, Mexico and the United States. Created against the background of the North American Free Trade Agreement, it is designed to provide common definitions of the industrial structure of the three countries and a common statistical framework to facilitate the analysis of the three economies. NAICS is based on supply-side or production-oriented principles, to ensure that industrial data, classified to NAICS, are suitable for the analysis of production-related issues such as industrial performance.

### **11. Agriculture, Forestry, Fishing and Hunting**

This sector comprises establishments primarily engaged in growing crops, raising animals, harvesting timber, harvesting fish and other animals from their natural habitats and providing related support activities.

Establishments primarily engaged in agricultural research or that supply veterinary services are not included in this sector.

### **21. Mining, Quarrying, and Oil and Gas Extraction**

This sector comprises establishments primarily engaged in extracting naturally occurring minerals. These can be solids, such as coal and ores; liquids, such as crude petroleum; and gases, such as natural gas. The term "mining" is used in the broad sense to include quarrying, well operations, milling (for example, crushing, screening, washing, or flotation) and other preparation customarily done at the mine site, or as a part of mining activity. Establishments engaged in exploration for minerals, development of mineral properties and mining operations are included in this sector. Establishments performing similar activities, on a contract or fee basis, are also included.

### **22. Utilities**

This sector comprises establishments primarily engaged in operating electric, gas and water utilities. These establishments generate, transmit, control and distribute electric power; distribute natural gas; treat and distribute water; operate sewer systems and sewage treatment facilities; and provide related services, generally through a permanent infrastructure of lines, pipes and treatment and processing facilities.

### **23. Construction**

This sector comprises establishments primarily engaged in constructing, repairing and renovating buildings and engineering works, and in subdividing and developing land. These establishments may operate on their own account or under contract to other establishments or property owners. They may produce complete projects or just parts of projects. Establishments often subcontract some or all of the work involved in a project, or work together in joint ventures. Establishments may produce new construction, or undertake repairs and renovations to existing structures.

**31-33. Manufacturing**

This sector comprises establishments primarily engaged in the physical or chemical transformation of materials or substances into new products. These products may be finished, in the sense that they are ready to be used or consumed, or semi-finished, in the sense of becoming a raw material for an establishment to use in further manufacturing. Related activities, such as the assembly of the component parts of manufactured goods; the blending of materials; and the finishing of manufactured products by dyeing, heat-treating, plating and similar operations are also treated as manufacturing activities. Manufacturing establishments are known by a variety of trade designations, such as plants, factories or mills.

**41. Wholesale Trade**

This sector comprises establishments primarily engaged in wholesaling merchandise and providing related logistics, marketing and support services. The wholesaling process is generally an intermediate step in the distribution of merchandise; many wholesalers are therefore organized to sell merchandise in large quantities to retailers, and business and institutional clients. However, some wholesalers, in particular those that supply non-consumer capital goods, sell merchandise in single units to final users.

**44-45. Retail Trade**

The retail trade sector comprises establishments primarily engaged in retailing merchandise, generally without transformation, and rendering services incidental to the sale of merchandise.

**48-49. Transportation and Warehousing**

This sector comprises establishments primarily engaged in transporting passengers and goods, warehousing and storing goods, and providing services to these establishments. The modes of transportation are road (trucking, transit and ground passenger), rail, water, air and pipeline. These are further subdivided according to the way in which businesses in each mode organize their establishments. National post office and courier establishments, which also transport goods, are included in this sector. Warehousing and storage establishments are subdivided according to the type of service and facility that is operated.

**51. Information and Cultural Industries**

This sector comprises establishments primarily engaged in producing and distributing (except by wholesale and retail methods) information and cultural products. Establishments providing the means to transmit or distribute these products or providing access to equipment and expertise for processing data are also included.

**52. Finance and Insurance**

This sector comprises establishments primarily engaged in financial transactions (that is, transactions involving the creation, liquidation, or change in ownership of financial assets) or in facilitating financial transactions.

### **53. Real Estate and Rental and Leasing**

This sector comprises establishments primarily engaged in renting, leasing or otherwise allowing the use of tangible or intangible assets. Establishments primarily engaged in managing real estate for others; selling, renting and/or buying of real estate for others; and appraising real estate, are also included.

### **54. Professional, Scientific and Technical Services**

This sector comprises establishments primarily engaged in activities in which human capital is the major input. These establishments make available the knowledge and skills of their employees, often on an assignment basis. The individual industries of this sector are defined on the basis of the particular expertise and training of the service provider.

### **55. Management of Companies and Enterprises**

This sector comprises establishments primarily engaged in managing companies and enterprises and/or holding the securities or financial assets of companies and enterprises, for the purpose of owning a controlling interest in them and/or influencing their management decisions. They may undertake the function of management, or they may entrust the function of financial management to portfolio managers.

### **56. Administrative and Support, Waste Management and Remediation Services**

This sector comprises two different types of establishments: those primarily engaged in activities that support the day-to-day operations of other organizations; and those primarily engaged in waste management activities.

### **61. Educational Services**

This sector comprises establishments primarily engaged in providing instruction and training in a wide variety of subjects. This instruction and training is provided by specialized establishments, such as schools, colleges, universities and training centres. These establishments may be privately owned and operated, either for profit or not, or they may be publicly owned and operated. They may also offer food and accommodation services to their students.

### **62. Health Care and Social Assistance**

This sector comprises establishments primarily engaged in providing health care by diagnosis and treatment, providing residential care for medical and social reasons, and providing social assistance, such as counselling, welfare, child protection, community housing and food services, vocational rehabilitation and child care, to those requiring such assistance.

**71. Arts, Entertainment and Recreation**

This sector comprises establishments primarily engaged in operating facilities or providing services to meet the cultural, entertainment and recreational interests of their patrons. These establishments produce, promote or participate in live performances, events or exhibits intended for public viewing; provide the artistic, creative and technical skills necessary for the production of artistic products and live performances; preserve and exhibit objects and sites of historical, cultural or educational interest; and operate facilities or provide services that enable patrons to participate in sports or recreational activities or pursue amusement, hobbies and leisure-time interests.

**72. Accommodation and Food Services**

This sector comprises establishments primarily engaged in providing short-term lodging and complementary services to travellers, vacationers and others, in facilities such as hotels, motor hotels, resorts, motels, casino hotels, bed and breakfast accommodation, housekeeping cottages and cabins, recreational vehicle parks and campgrounds, hunting and fishing camps, and various types of recreational and adventure camps. This sector also comprises establishments primarily engaged in preparing meals, snacks and beverages, to customer order, for immediate consumption on and off the premises.

**81. Other Services (except Public Administration)**

This sector comprises establishments, not classified to any other sector, primarily engaged in repairing, or performing general or routine maintenance, on motor vehicles, machinery, equipment and other products to ensure that they work efficiently; providing personal care services, funeral services, laundry services and other services to individuals, such as pet care services and photo finishing services; organizing and promoting religious activities; supporting various causes through grant-making, advocating (promoting) various social and political causes, and promoting and defending the interests of their members. Private households are also included.

**91. Public Administration**

This sector comprises establishments primarily engaged in activities of a governmental nature, that is, the enactment and judicial interpretation of laws and their pursuant regulations, and the administration of programs based on them. Legislative activities, taxation, national defence, public order and safety, immigration services, foreign affairs and international assistance, and the administration of government programs are activities that are purely governmental in nature.