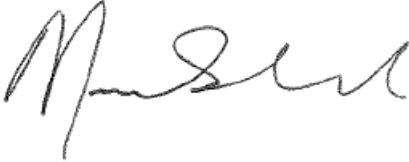




# INFORMATION REPORT

<b>TO:</b>	Mayor and Members General Issues Committee
<b>COMMITTEE DATE:</b>	February 17, 2021
<b>SUBJECT/REPORT NO:</b>	Information and Communications Technology (ICT) and Digital Media Sector FDI Strategy: Findings and Recommendations (PED21027) (City Wide)
<b>WARD(S) AFFECTED:</b>	City Wide
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<b>SIGNATURE:</b>	

## COUNCIL DIRECTION

Not Applicable

## INFORMATION

In October 2019, MDB Insight, a leading Canadian management consulting firm specializing in economic development, was awarded the contract to undertake an Information and Communications Technology (ICT) and Digital Media Sector Foreign Direct Investment (FDI) Strategy, further to be known as 'The Strategy', (Appendix A).

The Strategy describes the current state and value proposition of Hamilton's ICT and Digital Media sector. It includes detailed research and analysis, a comprehensive consultation process with businesses and industry partners and potential FDI targets for the City. It provides a clear description of the current state of the sector, identifies gaps and opportunities along with providing guidance on the required actions that will assist the City of Hamilton to encourage and support this growing and evolving sector.

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OUR Vision: To be the best place to raise a child and age successfully.

OUR Mission: To provide high quality cost conscious public services that contribute to a healthy, safe and prosperous community, in a sustainable manner.

OUR Culture: Collective Ownership, Steadfast Integrity, Courageous Change, Sensational Service, Engaged Empowered Employees.

## **Defining the Information and Communications Technology (ICT) & Digital Media Sector in Hamilton**

The working definition of the ICT and Digital Media Sector in Hamilton is based on the North American Industry Classification System (NAICS) codes. The definition is further informed by the Innovation, Science and Economic Development, Canadian ICT Sector Profile. The ICT and Digital Media sector are further sub-divided into six sub-sectors based on industry focus, namely, manufacturing, wholesale, information and cultural, professional and technical services, educational services and other services. The sub-sectors are further detailed below:

- Manufacturing – includes firms specializing in the manufacturing of computer and peripheral equipment, communications equipment, electronic components, audio and video equipment and magnetic and optical media.
- Wholesale – includes firms engaged in wholesaling new and used computers, computer peripherals and pre-packaged computer software, electronic components, navigational and communications equipment and supplies.
- Information and Cultural – includes firms engaged in core sub-sectors including software publishers, computer systems design and telecommunications carriers along with digital media economies including film and sound industries.
- Professional and Technical Services – includes firms engaged in core professional and technical services such as digital design, video game and computer systems design.
- Educational Services – includes computer training and professional schools that form an important part of the ICT & Digital Media value chain.
- Other Services – includes firms engaged in repairing and maintaining electronic equipment and precision instruments.

## **Information and Communications Technology (ICT) and Digital Media Sector Report Highlights**

Economic snapshot of the sector:

- 4% of all industries in the City can be classified as ICT & Digital Media
- Hamilton's ICT & Digital Media sector makes a strong and growing contribution of \$1.3 billion to the local economy
- Sector has experienced a steady increase from 1,487 enterprises in 2016 to 1,808 or 22% in 2019
- 60% of ICT & Digital Media businesses in Hamilton are in the professional scientific and technical services
- Hamilton ranks 6<sup>th</sup> in number of ICT & Digital Media business compared to ten select communities

- Of the 1,808 businesses 68% are sole proprietorships
- 55% of the businesses are in the growth phase with increasing revenues and customers
- 79% of businesses expect business revenues to increase

Top occupations include:

- Information systems analysts and consultants
- Computer programmers and interactive digital media developers
- Graphic designers and illustrators
- Software engineers and designers
- Computer and information system managers

### **Advancing Hamilton's ICT & Digital Media Sector**

The City of Hamilton is well-positioned to capitalize on the growing opportunities and strengths of the ICT and Digital Media sector. The sector has seen a higher rate of growth compared to all other industry sectors within the City. This has been driven primarily by professional and technical services and the information and cultural services. Digital media is an important aspect of these industries for the production and delivery of content including motion pictures, videos, television programs or commercials. Niche opportunities exist for the City, including Interactive Digital Media (IDM) and health-based technologies.

#### **1. Key Opportunity Areas and Considerations**

Interactive Digital Media (IDM) refers to the industry of user engaged digital platforms. IDM includes games developers and publishers, eLearning software developers, VR/AR/MR developers, VR arcades, mobile app developers, digital advertising firms, interactive site web developers and software developers servicing the above companies. Digital media is one of the fastest-growing parts of the creative cultural industries, both as a sector onto itself, tied closely to gaming, and as a force transforming the creation and distribution of a wide range of cultural content. The recent investment of a production hub in the City-owned Barton-Tiffany lands will enable crossover opportunities in post-production, animation, visual effects, and game development. The City has a strategic opportunity to position Hamilton as a top city in Ontario for investment in digital media supporting digital content producers in film and television.

Hamilton has several successful businesses in the digital media space including Q4, Pipeline Studios, Fluidmedia, Hifyre and Operatic. Supporting these businesses is a network of innovation and education partners. Some key examples include start-up

programming provided by Innovation Factory, the Forge accelerator, iDeaWORKS and Mohawk College's Graphic Design Advanced Diploma. Also, the AVR Development Lab at Mohawk College functions as a training and research hub for AR/VR (augmented and virtual reality).

Hamilton's technology strengths are also visible in the health sector, specifically in digital health. Opportunities include system integration, interoperability to prototype novel technologies and educating the next generation of digital health entrepreneurs.

The mHealth & eHealth Development and Innovation Centre (MEDIC) at Mohawk College with a focus on digital health serves to bridge the gap between innovative industries and the mobile health and ehealth needs of the healthcare system. In addition to MEDIC, McMaster University offers Canada's only masters in eHealth, designed to build capacity around digital health informatics. Further, the Institute for Applied Health Sciences, a collaboration between Mohawk and McMaster, enables real-world experiences for more than 2,000 students a year. And, Hamilton Health Sciences (HHS) and the CREATE (CentRE for dAta science and digiTal hEalth) will help clinicians in the multi-site hospital and in the surrounding area produce information technology solutions that can raise the quality of patient care and improve medical outcomes.

## **2. Leveraging Digital Transformation During COVID-19**

COVID-19 is significantly impacting the technology sector. More positively, disruption in the sector has caused an acceleration of remote working. The Strategy findings further predict that in the mid to long-term, the sector will witness a digital transformation and 'servicisation' trend. Remote working, distance learning, online media content, telemedicine, eCommerce, and Real Estate "Servicisation" are among the key industries driving this transformation. Hamilton is in a unique position to capitalize on their digital businesses and pave the way for digital transformation. A strong digital strategy is critical in this regard.

## **3. ICT & Digital Media FDI Opportunity**

As part of The Strategy development for the ICT & Digital Media sector, a potential company targets exercise was completed. The results of the FDI analysis complements the sector analysis results that identified niche opportunities for Hamilton in IDM.

High priority potential targets were identified that are larger and medium-sized high growth companies. The targets are in IDM, cloud solutions, gaming, AR/VR, autonomous vehicles and AI. Data science/analytics and video conferencing are also identified as sectors that will benefit from the COVID-19 pandemic. EdTech is also an

important sector given the impact of COVID-19. Companies are likely to be experiencing a growth spike due to the surge in remote learning in education.

Medium and low priority targets were also identified. Hamilton's 2016-2020 Economic Development Action Plan noted a key action to establish a Sports Analytics Cluster. This sector, while small, is rapidly evolving. Notably, this sub-sector has little or no presence in Canada so Hamilton could have a first-mover advantage here. This sector is identified to be one of the sectors adversely affected by COVID-19.

Motion capture was also identified. They show long term prospect and are a great fit for Hamilton as a) it combines sports and manufacturing applications and b) is at the intersection of AR/VR and artificial intelligence. This sector is identified to be one of the sectors adversely affected by COVID-19.

#### **4. ICT and Digital Media Sector Action Plan**

The primary focus of the City of Hamilton's ICT & Digital Media Sector FDI Strategy was to build a strong body of knowledge to inform subsequent, research, consultation, and strategy formulation. The following recommendations were determined to help position and prepare the City for future sector investment and strategic planning:

- **Foster an ICT & Digital Media Growth Environment**  
A cohesive sector with the data, support services and networks to enable business growth, innovation, and investment.
- **Support Skills Development, Talent Attraction and Retention**  
A world-class quality talent pipeline committed to mutual success ensures local firm growth and serves as a global marketing tool for the City.
- **Targeted Investment Attraction in Niche Sectors**  
A growth sector with ongoing investment in niche industries, enhanced competitiveness, and job creation.
- **Showcase Hamilton's ICT & Digital Media Sector through Marketing and Branding**  
A global Hamilton brand with a unique value proposition that is effectively marketed to local, regional, and international markets.

The completion of The Strategy was an identified action item in the City's Economic Development Action Plan 2016 – 2020 and more importantly, it will position the sector for the upcoming update to the 2021- 2025 Economic Development Action Plan.

**APPENDICES AND SCHEDULES ATTACHED**

Appendix A – ICT & Digital Media FDI and Sector Strategy