

**Date:** 2021-03-11

**Subject:** **Industry Report – Advanced Manufacturing Analysis with a Focus on Robotics and Automation**

**Contact:** **Clare Barnett, Director, Economic Development**

**Report Number:** Planning, Bld & Ec Dev-2021-341

**Recommendations:**

1. **THAT** the report from Martin Bohl, Sector Manager, dated March 11, 2021, to the Committee of Council meeting of March 31, 2021 entitled “**Industry Report – Advanced Manufacturing Analysis with a Focus on Robotics and Automation**” (2021-341, File CE.x), be received; and
2. **THAT** the Industry Report and its key findings continue to be used to guide the City’s Economic Recovery plan as it relates to advanced manufacturing.

**Overview:**

- In October 2020, the City of Brampton was approved for a grant of up to a total of \$12,500, from the federal government’s CanExport – Community Investment program to co-fund a study on the status of robotics and automation in Brampton’s manufacturing sector.
- City of Brampton Economic Development staff collaborated with the Trillium Network for Advanced Manufacturing to:
  1. Learn more about the composition and competitive dynamics of Brampton’s manufacturing ecosystem;
  2. Assess the extent to which Brampton manufacturers have adopted, or plan to adopt, automation, robotics, and other advanced production technologies (and identify companies in Brampton that manufacture or support the adoption of these technologies); and
  3. Identify technological gaps and opportunities to attract domestic and foreign direct investment.

**Background:**

Manufacturing is a critical component of Brampton's economy, and of Ontario's economy generally. The manufacturing sector is evolving rapidly, and changes to technology, infrastructure, human resources, and government policy significantly influence investment decisions and competitiveness. Moreover, the COVID-19 pandemic has profoundly impacted the trajectory of manufacturing in Brampton and across Ontario.

It is within this context that the Trillium Network for Advanced Manufacturing collaborated with the City of Brampton's Economic Development Office to undertake a project to assess the extent to which Brampton manufacturers have adopted, or plan to adopt, automation, robotics, and other advanced production technologies. Within this project the team also examined the composition of Brampton's manufacturing sector, identified several companies and organizations in Brampton that actively manufacture or support the adoption of advanced production technologies, as well as opportunities to attract domestic and foreign direct investment.

The project was informed by three sources of data. The first includes government statistics, which were used to create a profile of Brampton's manufacturing sector. The second was a database of several hundred Brampton manufacturing establishments created from publicly available information. The third source was interviews with representatives of eight Brampton-based manufacturers. Included among these were automotive, aerospace, food, beverage, pharmaceutical, automation and tooling, and packaging manufacturers.

Through this work staff gained valuable insight into Brampton's manufacturing sector, highlights of the findings include;

- Recognition that Brampton's manufacturing workforce is talented.
- Brampton's transportation and telecommunications infrastructure ensures that manufacturers are well-connected to each other, and to the rest of the GTA, Ontario, North America, and the world.
- Brampton's manufacturing sector is diverse, and that this leads to diversity in the experience of manufacturers as they related to "automation readiness" and the adoption of automation, robotics, and advanced production technologies. While some manufacturers have made significant progress, others are lagging. There are several reasons why this is the case, all of which are explored in more detail in the full report.

Investing in automation, robotics, and advanced production technologies (and supporting manufacturing generally) is critical to the future competitiveness of Brampton's manufacturing sector. This is especially important as the sector emerges from the COVID-19 pandemic and realizes the full extent of its economic impact and future recovery. As such, a productive and technologically sophisticated advanced manufacturing sector will be critical in generating the employment and revenue necessary to support Brampton's economy on an ongoing basis.

## **Current Situation:**

According to The Trillium Network for Advanced Manufacturing, Brampton is home to more than 400 manufacturing establishments that employ more than 40,000 people. It's worth noting that Statistics Canada estimates the number of manufacturers to be much higher (over 1,500), however Trillium is focused on establishments with physical spaces and more than one employee.

Brampton's manufacturing sector contributes \$5.16 billion to GDP, and its employees earn more than \$2.4 billion, annually. These employees pay more than \$285 million in federal incomes taxes, \$143 million in provincial incomes taxes, contribute more than \$109 million to CPP, and pay more than \$32 million in employment insurance premiums. In short, manufacturing makes an outsized contribution to Brampton's economy and tax base, and Brampton makes an outsized contribution to Ontario's manufacturing ecosystem and economy. It is an important contributor to jobs in Brampton and to the economic recovery of 2021.

### **Term of Council Priorities:**

This study supports the City's Economic Recovery Plan and given the economic size and importance of the manufacturing sector in Brampton, Economic Development staff will continue to prioritize the sector through business retention and investment attraction support, talent development and encourage the adoption of new innovations and technologies through post-secondary and sector partnerships.

### **Conclusion:**

Manufacturing is critically important to Brampton's economy. As manufacturers' competitive calculus evolves, especially in the context of the COVID-19 pandemic, investing in automation, robotics, and other advanced production technologies is more important than ever. This report provides an overview of Brampton's advanced manufacturing sector and examines the sector's current state of automation (or 'automation readiness'). The report draws on government statistics and the perspectives of eight manufacturers profiled as part of the project. The report includes their perspectives on the opportunities for and constraints on further investments in automation, robotics, and advanced production technologies. Also included are their perspectives on several other matters, including labour markets, infrastructure, and the impact of government policies and regulations.

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**Attachments:**

Appendix A: Brampton's Advanced Manufacturing Sector Overview