

# Québec Innovative

Advanced manufacturing

# A unique ecosystem in advanced manufacturing



Canada is in the Network Readiness Index's top 15. The index measures the impact of information and communication technology (ICT) on economic growth.

Source: Portulans Institute, 2020.



Québec goes digital. According to a study by the Business Development Bank of Canada (BDC), Québec businesses have committed to the digital transition in a greater proportion than businesses in other Canadian provinces.

Source: BDC, 2017.

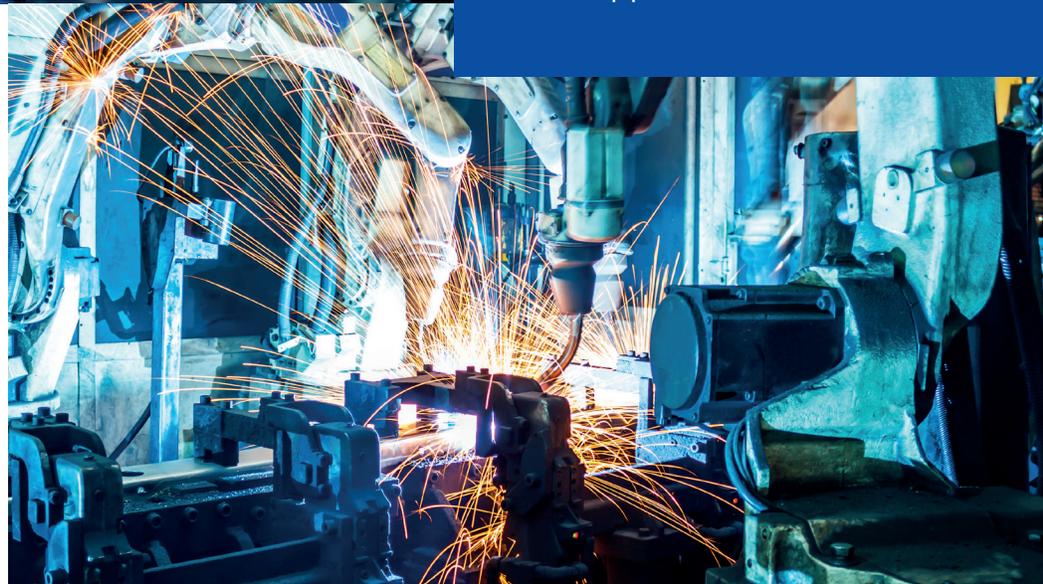


Québec is home to several innovative manufacturing research centres.

- › The Centre de recherche industrielle du Québec (IQ-CRIQ) and the National Research Council of Canada (NRCC) which have laboratories and experts in several cutting-edge fields.
- › The College Centers for the Transfer of Technology (CCTT) regrouped under Synchronex's Escouade Numérique.
- › The Centers of Industrial Expertise Network (4 centers) which offer technological showcases for advanced manufacturing solutions.
- › The Innovation 4.0 Network which brings together university initiatives in basic and applied research.

## Advanced manufacturing trends

- › Artificial intelligence
- › Robotics and automation systems
- › Software and specialized services

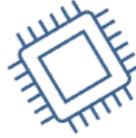


# Solutions in a number of sectors



## Equipment and tools

- › Sensors
- › Industrial robots
- › Monitoring systems
- › Mechanical systems



## Software, AI and big data

- › Design/engineering
- › Production management
- › Logistics and supply management
- › Business-intelligence software



## Specialized services

- › Design
- › Connectivity
- › Integration
- › Optimization/monitoring
- › Custom programming
- › Security

Source: Study conducted by Deloitte and E&B Data on behalf of the Regroupement des entreprises en automatisation industrielle (REAI). *Portrait 2019 – La fabrication de pointe au Québec, 2020.*

## Québec's advanced manufacturing industry: a few figures

- Number of businesses offering solutions
- Number of jobs in the industry
- Contribution to the GDP

More than **680** businesses

More than **44,000** jobs

Close to **\$5.2 G**

Source: Study conducted by Deloitte and E&B Data on behalf of the Regroupement des entreprises en automatisation industrielle (REAI). *Portrait 2019 – La fabrication de pointe au Québec, 2020.*



## A favourable business environment for innovative manufacturing

The digital transformation of manufacturing SMEs provides a real opportunity to develop Québec's manufacturing sector and economic growth.

The government of Québec has therefore implemented several initiatives to support and assist companies in adopting advanced manufacturing solutions, including the following:

- › Investissement Québec's Productivity Innovation initiative aims to boost competitiveness and accelerate the growth of businesses through productivity and innovation.
- › The Digital Transformation Offensive (OTN), a strategic initiative led by the Ministère de l'Économie et de l'Innovation, is intended to accelerate the digital shift of businesses across all sectors of activity and regions of Québec. It especially aims to mobilize strategic partners in the economic development ecosystem and expertise networks and enhance their concerted actions.

These government incentives help make Québec an advantageous business environment for adopting advanced manufacturing solutions through a unique offer in the field.

# Advanced manufacturing ecosystem in Québec

SUB-SECTORS	INDUSTRIES	
<b>Equipment and tools</b>	<ul style="list-style-type: none"> <li>▪ Robotiq</li> <li>▪ Famic Technologies</li> <li>▪ Kinova</li> <li>▪ Mecademic</li> <li>▪ Omnirobotic</li> <li>▪ AGT Robotics</li> <li>▪ Machinex</li> <li>▪ Vention</li> </ul>	<ul style="list-style-type: none"> <li>▪ Servo-Robot</li> <li>▪ AGT Robotics</li> <li>▪ AON3D</li> <li>▪ Automatisation JRT</li> <li>▪ Beckhoff</li> <li>▪ Laserax</li> <li>▪ ABB</li> </ul>
<b>Software, AI and big data</b>	<ul style="list-style-type: none"> <li>▪ Fluent AI</li> <li>▪ Stradigi AI</li> <li>▪ Element AI</li> <li>▪ Algolux</li> </ul>	<ul style="list-style-type: none"> <li>▪ Genius Solutions</li> <li>▪ Poka</li> <li>▪ VKS</li> </ul>
<b>Specialized services</b>	<ul style="list-style-type: none"> <li>▪ LeddarTech</li> <li>▪ Siemens</li> <li>▪ WSP</li> <li>▪ OPTEL</li> <li>▪ Noovelia</li> <li>▪ CGI</li> </ul>	<ul style="list-style-type: none"> <li>▪ Créaform ingénierie</li> <li>▪ GCM Consultants</li> <li>▪ Excelpro</li> <li>▪ Norda Stelo</li> <li>▪ Premier Tech</li> </ul>
<b>Associations</b>	<ul style="list-style-type: none"> <li>▪ Regroupement des entreprises en automatisation industrielle (REAI)</li> <li>▪ Association québécoise des technologies (AQT)</li> </ul>	<ul style="list-style-type: none"> <li>▪ Mouvement québécois de la qualité (MQQ)</li> <li>▪ Numana</li> <li>▪ STIQ</li> </ul>
<b>R&amp;D and innovation organizations</b>	<p><b>College Centers for the Transfer of Technology</b></p> <ul style="list-style-type: none"> <li>▪ Synchronex (escouade numérique) <ul style="list-style-type: none"> <li>• Centre de production automatisée (CPA)</li> <li>• Centre de robotique, vision et IA (CRVI)</li> <li>• Centre d'intelligence artificielle appliquée JACOB</li> <li>• MECANIUM</li> <li>• Centre technologique en aérospatiale (CTA)</li> <li>• Productique Québec</li> <li>• Solutions Novika</li> <li>• Institut technologique de maintenance industrielle (ITMI)</li> </ul> </li> </ul> <p><b>University</b></p> <ul style="list-style-type: none"> <li>▪ Réseau Innovation 4.0 <ul style="list-style-type: none"> <li>• École de technologie supérieure (ÉTS) – Pôle innovation 4.0</li> <li>• Université Concordia – Centre for Advanced Manufacturing</li> </ul> </li> </ul>	<p><b>Innovation</b></p> <ul style="list-style-type: none"> <li>▪ NRCC</li> <li>▪ IQ-CRIQ</li> <li>▪ INO</li> <li>▪ Centre de recherche informatique de Montréal (CRIM)</li> <li>▪ IVADO</li> <li>▪ Mila</li> <li>▪ C2MI</li> <li>▪ Consortium de recherche et d'innovation en aérospatiale au Québec (CRIAQ)</li> <li>▪ Centres d'expertise industrielle (CEI) <ul style="list-style-type: none"> <li>• Digifab QG</li> <li>• CEI MTL</li> <li>• Centre national intégré du manufacturier intelligent (CNIMI)</li> <li>• CEI de Québec International</li> </ul> </li> </ul>

Note: This ecosystem is not exhaustive.

Québec.ca/international