Ontario’s Automotive Sector: Economic Contribution and Key Players

Quarterly Specialized Report

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Note: Throughout this document the graphs reference the North American Industry Classification System (NAICS) codes. Details of these codes can be found at census.gov/naics
1. Executive Summary

Ontario is the home of Canada’s automotive sector. It is a hub of vehicle production, and the only province in Canada that assembles vehicles, with five original equipment manufacturers (OEMs) operating plants (Ford, General Motors [GM], Honda, Stellantis, and Toyota). Through this unique position, Ontario contributes significantly to Canada’s economy, trade, and employment.

In 2020, the automotive manufacturing sector contributed over $11B to the national GDP. In 2022, more than 104K people were employed in the automotive sector across the province, representing 80% of all Canada’s automotive employees. Over 36.5K of these employees worked at one of the five OEMs, where they contributed to the production of over 1.5M Ontario-made vehicles in 2023.

Ontario far exceeds all other Canadian provinces in motor vehicle exports; it was responsible for $75B in exports in the motor vehicle manufacturing, body and trailer manufacturing, and parts manufacturing sectors in 2023. The province has also attracted $43B in new automotive investments since 2020, including investments in electric vehicle (EV) and EV battery production. A substantial amount of this investment originated from the five OEMs, with $25.4B of investment announced between them since 2018.

With demand for EVs expected to grow, Ontario is very well positioned to respond to the needs of the automotive industry in the electric transformation. Ontario’s response to the ongoing transformation is driven by Driving Prosperity, the Government of Ontario’s plan for the future of the province’s automotive sector. This plan outlines a vision in which Ontario is “a North American hub for developing and building the car of the future through emerging technologies and advanced manufacturing processes”.

Through this plan, the provincial government has committed to partner with the auto industry to:

1. Reposition vehicle and parts production for the car of the future.
2. Establish and support a battery supply chain ecosystem.
3. Innovate in every stage of development.
4. Invest in Ontario’s auto workers.

This report, which has been developed in collaboration with Global Automakers of Canada, presents an overview of Ontario’s automotive sector, including its contributions to the economy, trade, and employment. It also provides a summary of the automotive ecosystem, outlining key locations, investments, and actors, including high level profiles of each of the OEMs operating in the province.

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* While more recent GDP data is available in chained dollars from Statistics Canada, this report presents GDP in current dollars in order to facilitate a comparison between various industries. The most recent GDP data available in current dollars is from 2020.
Ontario’s Automotive Sector at a Glance

**Employment**
- >104K people employed in automotive manufacturing in Ontario in 2022
- 80% share of Canadian automotive manufacturing jobs in Ontario in 2022

**Trade**
- $109B Ontario’s total automotive manufacturing imports in 2023
- $75B Ontario’s total automotive manufacturing exports in 2023

**GDP**
- $11B Ontario’s automotive industry contribution to national GDP in 2020

**Investments**
- $43B in new automotive investments announced in Ontario since 2020

**Sales**
- 41% Ontario’s share of Canada’s new motor vehicles sales in 2023

**Percentage of total & new vehicle registrations that are EVs**
2. Ontario’s Automotive Manufacturing Industry – Contributions to Economy, Trade & Employment
GDP

Manufacturing is a vital industry in Ontario, contributing $86B towards the province’s GDP. The manufacturing industry is second only to real estate, rental, and leasing in terms of GDP contributions.

“Our government is creating the right conditions for multinational manufacturers to grow in Ontario and create more good-paying jobs across the province.”

The Honourable Victor Fedeli, Minister of Economic Development, Job Creation and Trade

<table>
<thead>
<tr>
<th>Industry</th>
<th>Billions of dollars</th>
</tr>
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<tbody>
<tr>
<td>Real estate, rental and leasing [53]</td>
<td>115</td>
</tr>
<tr>
<td>Manufacturing [31-33]</td>
<td>86</td>
</tr>
<tr>
<td>Finance and insurance [52]</td>
<td>80</td>
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<tr>
<td>Public administration [91]</td>
<td>63</td>
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<tr>
<td>Professional, scientific and technical services [54]</td>
<td>63</td>
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<tr>
<td>Construction [23]</td>
<td>61</td>
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<tr>
<td>Health care and social assistance [62]</td>
<td>59</td>
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<tr>
<td>Wholesale trade [41]</td>
<td>51</td>
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<tr>
<td>Educational services [61]</td>
<td>48</td>
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<tr>
<td>Retail trade [44-45]</td>
<td>38</td>
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Ontario boasts a diverse array of manufacturing industries spanning multiple sectors. Among these, transportation equipment manufacturing stands out as the most significant contributor to Ontario’s GDP (16%), surpassing other manufacturing industries such as food (14%), chemicals (11%), and machinery (8%). The robust performance of the transportation equipment manufacturing sector underscores its pivotal role in shaping Ontario’s economic landscape.

Ontario GDP by manufacturing industry 2020

- Transportation equipment manufacturing: $13.8B (16%)
- Food manufacturing: $12.2B (14%)
- Chemical manufacturing: $9.6B (11%)
- Fabricated metal product manufacturing: $7.4B (9%)
- Plastics and rubber products manufacturing: $5B (6%)
- Primary metal manufacturing: $4B (5%)
- All others industries: $26.5B (31%)

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Automotive manufacturing makes up around 80% of the transportation equipment manufacturing market in Ontario; the remaining types of transportation manufacturing—including aerospace, rail, ship, and boat building—contributed approximately $2.8B combined to GDP.

Ontario’s automotive manufacturing industry plays a significant role in Canada’s economy, contributing over $11B towards GDP in 2020.\(^\text{13}\)
Trade

As shown in the graph below, Ontario far exceeds all other provinces in terms of global motor vehicle exports. In 2023, Ontario was responsible for $75B in exports of products in the motor vehicle manufacturing, body, and trailer manufacturing, and parts manufacturing sectors combined. In comparison, the second largest exporter – Quebec – was responsible for just $5B in exports.

Motor vehicle exports by province 2002 – 2023

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Graph shows the combined value of motor vehicle, body, and parts exports (NAICS 3361, 3362, and 3363).
In 2023, Ontario’s motor vehicle manufacturing exports made up 73% of the automotive manufacturing export market, contributing $54.5B. Parts manufacturing exports were worth $19.7B, equivalent to 26% of total automotive manufacturing exports, with body and trailer manufacturing exports making up a significantly smaller 1% of total exports, at $0.7B.

These contributions make up a significant share of the Canadian exports market, highlighting Ontario’s role at the heart of the industry.

"With a world-class workforce, state-of-the-art research and development facilities, and an abundance of critical minerals, Ontario has secured its position as a global leader in the auto sector." The Honourable Victor Fedeli, Minister of Economic Development, Job Creation and Trade

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**Imports**
The United States is the largest source of Ontario’s motor vehicle imports, sending 64% ($69B) of all imports. The second largest source of Ontario’s motor vehicle imports is Mexico, sending 17% ($18B), followed by South Korea and Japan, sending 6% each ($6.6B and $6.5B respectively), and China, sending 2% ($2.4B).

**Exports**
96% of motor vehicles exported from Ontario are sent to the United States - $72B worth. A small proportion of vehicles are exported to Mexico (2% - $1.6B), China (0.6% - $0.4B), the United Arab Emirates (0.2% - $0.1B), and Germany (0.2% - $0.1B).
In 2023, nearly 720K new motor vehicles were sold in Ontario – 41% of all vehicles sold in Canada. The majority of these were light trucks, which includes minivans, sport-utility vehicles, light trucks, and vans – over 590K light trucks were sold in Ontario in 2023. Sales of light trucks have gradually overtaken passenger car sales since 2010. Along with the global motor vehicle sales market, Ontario experienced a reduction in overall sales in 2020, but this is expected to grow again over the coming years.

New motor vehicle sales in Ontario 2010-2023
Ontario’s automotive manufacturing industry employed over 104K people in 2022, with most specializing in motor vehicle parts manufacturing.\textsuperscript{28}

Across Canada, nearly 130K people were employed in the industry in 2022, with Ontario accounting for a notable 80% of all automotive manufacturing jobs nationwide.\textsuperscript{29}

**Automotive manufacturing employment in Ontario 2022\textsuperscript{30}**

- **Motor vehicle manufacturing** [3361]
- **Automobile and light-duty motor vehicle manufacturing** [33611]
- **Heavy-duty truck manufacturing** [33612]

- **Motor vehicle body and trailer manufacturing** [3362]

- **Motor vehicle parts manufacturing** [3363]
  - Motor vehicle gasoline engine and engine parts manufacturing [33631]
  - Motor vehicle electrical and electronic equipment manufacturing [33632]
  - Motor vehicle steering and suspension components manufacturing [33633]
  - Motor vehicle brake system manufacturing [33634]
  - Motor vehicle transmission and power train parts manufacturing [33635]
  - Motor vehicle seating and interior trim manufacturing [33636]
  - Motor vehicle metal stamping [33637]
  - Other motor vehicle parts manufacturing [33639]
3. Ontario’s Automotive Manufacturing Ecosystem
Ontario is at the centre of Canada’s automotive industry, home to five OEMs. These are Ford, General Motors, Toyota, Stellantis, and Honda. There are also six major battery or battery materials plants currently planned or under construction, with three owned by Honda: a battery manufacturing plant, a battery separator factory in partnership with Asahi Kasei, and a Battery Active Materials (BAMs) factory in partnership with POSCO, the location of which is still to be announced. These are due to be operational by 2028, 2027, and 2028 respectively. Additional plants are owned by NextStar Energy, Umicore, and Volkswagen, which are due to be operational by 2025, 2026, and 2027 respectively. This will further strengthen the role of Ontario as a leader in this domain. The map below presents all the battery material and battery manufacturing plants as well as engine, parts, and assembly plants related to the major OEMs. However, the map does not include all parts and assembly plants in Ontario.
4. Recent Investments in Ontario
Automotive Investments 2020 - 2024

Global automakers, parts suppliers, and EV battery manufacturers have announced $43B worth of investments in Ontario since 2020.38 Recent announcements include Honda’s investment of $15B to expand its EV manufacturing operations in North America.39 This investment, announced in April 2024, includes the development of a 36 GWh equivalent battery manufacturing plant in Alliston, a BAMS factory in a joint venture with South Korea’s POSCO, a battery separator factory in a joint venture with Japanese chemicals company Asahi Kasei, and a brand-new EV manufacturing plant in Alliston.40 In October 2023, Umicore – a multinational materials technology company – confirmed expansion of its EV battery materials production in Ontario.41 The organization announced $2.1B investment to construct a 35 GWh equivalent battery materials production plant in Loyalist.42 In June 2023, Volkswagen announced investment of $7B to build a 90 GWh equivalent EV battery manufacturing plant in St. Thomas.43

Selection of Ontario’s top investors

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<thead>
<tr>
<th>Company</th>
<th>Total Investment</th>
<th>Year Announced</th>
<th>Facility Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>ArcelorMittal</td>
<td>$1.8B</td>
<td>2021</td>
<td>Steel manufacturing plant</td>
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<tr>
<td>Magna</td>
<td>$470M</td>
<td>2023</td>
<td>Auto parts manufacturing plant</td>
</tr>
<tr>
<td>M.I.T.</td>
<td>$102M</td>
<td>2023</td>
<td>Auto parts manufacturing plant</td>
</tr>
<tr>
<td>Umicore®</td>
<td>$2.1B</td>
<td>2023</td>
<td>Battery materials manufacturing plant</td>
</tr>
<tr>
<td>NextStar Energy Inc.</td>
<td>$5B</td>
<td>2022</td>
<td>Battery manufacturing plant</td>
</tr>
<tr>
<td>VW</td>
<td>$7B</td>
<td>2023</td>
<td>Battery manufacturing plant</td>
</tr>
<tr>
<td>Honda</td>
<td>$15B</td>
<td>2024</td>
<td>Battery materials, battery manufacturing, and vehicle assembly plants</td>
</tr>
<tr>
<td>Honda</td>
<td>$1.4B</td>
<td>2022</td>
<td>Vehicle assembly plant</td>
</tr>
<tr>
<td>Ford</td>
<td>$1.8B</td>
<td>2020</td>
<td>Vehicle assembly plant</td>
</tr>
<tr>
<td>GM</td>
<td>$2.2B</td>
<td>2022</td>
<td>Vehicle assembly plant</td>
</tr>
<tr>
<td>Stellantis</td>
<td>$3.6B</td>
<td>2022</td>
<td>Vehicle assembly plant</td>
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</table>
In 2022, NextStar Energy Inc. – a partnership between Stellantis and LG Energy Solution – announced investment of $5B to build a 49 GWh EV battery manufacturing plant in Windsor.44

Steel manufacturer ArcelorMittal announced investment of $1.8B in 2021 to reduce the carbon intensity of its steel manufacturing plant in Hamilton.45 In February 2023, an investment of $470M was announced by Magna International Inc.46 This investment from the automotive parts manufacturer includes an EV battery parts factory in Brampton.47

Another automotive parts manufacturer, Mitsui High-tec (Canada) Inc., announced an investment of $102M in June 2023 to build a new EV parts manufacturing facility.48 Other investments include $3.6B from Stellantis, $2.2B from GM, $1.8B from Ford, and $1.4B from Honda. More information around these investments can be found in Chapter 6.49 These investments reiterate the potential for future economic growth and support Ontario’s agenda to produce the car of the future.
5. The Electric Transformation and Ontario's Unique Position
Demand for Electric Vehicles

Demand for EVs – across battery electric, hybrid electric and plug-in hybrid – is expected to grow over the coming years. In 2022, there were over 26M EVs on the road worldwide, with EV car sales exceeding 10M – an increase of 55% relative to 2021. The International Energy Agency has predicted that there could be up to 240M EVs on roads globally by 2030. In addition to this, Canada has set a mandatory target for 100% of new light-duty car and passenger truck sales to be zero-emission by 2035.

In Ontario, the percentage of total vehicle registrations that are battery electric, hybrid electric and plug-in hybrid EVs has grown from 1% in 2017 to 3% in 2022. For new vehicle registrations, the percentage of EVs grew from 2% in 2017 to 12% in 2022. Additional data shows that new vehicle registrations for battery electric, hybrid electric, and plug-in hybrid EVs reached approximately 17% in 2023.

"As the world shifts toward more sustainable vehicles, Canada is seizing the opportunity and positioning itself as a global leader when it comes to building the cars of the future...With a highly skilled workforce, clean energy, an abundance of critical minerals, access to markets, and a flourishing electric vehicle ecosystem, Canada has everything that companies...need to grow.”

The Honourable Victor Fedeli, Ontario Minister of Economic Development, Job Creation & Trade

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6. Ontario’s Key Automakers
Ontario’s Key Automakers

>1.5M
total number of vehicles produced by Ontario’s key automakers in 2023

36.5K
total number of people employed by Ontario’s key automakers

$25.4B
value of investment commitments made by Ontario’s key automakers since 2018

Ford
GM
HONDA
STELLANTIS
TOYOTA
Ford

Ford began operating in Canada 120 years ago, in 1904. Its operations in Ontario now consist of its national headquarters in Oakville; three vehicle assembly and engine manufacturing plants in Oakville, Windsor, and Essex; a regional office in Oakville; and two parts distribution centres in Paris and Casselman.

In 2020 Ford announced an investment of $1.8B to transform its Oakville Assembly Complex into a Canadian hub of EV manufacturing. This site alone employs over 3K people and will include EV and battery pack assembly. It is expected to begin production in 2027.

“Ford’s investment to transform its Oakville facility to manufacture passenger electric vehicles will strengthen our end-to-end EV supply chain and help ensure that the vehicles of the future are built here in Ontario. With our plan to build a strong Ontario, we continue to create the right conditions for businesses and workers to succeed now and for generations to come.”

The Honourable Victor Fedeli, Ontario Minister of Economic Development, Job Creation & Trade
General Motors

GM’s operations in Canada began over 100 years ago, in 1918. The multinational automotive manufacturing company has had its Canadian hub in Ontario ever since, with assembly and propulsion plants in Oshawa, St Catharines, and Ingersoll.

The following vehicles are produced at GM’s assembly plants in Ingersoll and Oshawa: BrightDrop Zevo (fully electric delivery van), Chevrolet Heavy Duty Silverado, and Chevrolet Light Duty Silverado. The St. Catharines facility produces the following: Gen V8 Engine, High-Feature V6 Engine, GF6 Transmission, and C8 Dual Clutch Transmission

A core part of GM’s operations in Ontario are its four Canadian Technical Centres (CTC): the Oshawa and Markham Elevation Centres, the Kapuskasing Proving Ground, and the McLaughlin Advanced Technology Track. Around 1,300 engineers are based at these campuses, where state-of-the-art labs, test tracks, simulation, and AI/Machine Learning enable innovation, research, and development.

In 2022, GM Canada announced investment of more than $2B to develop Canada’s first full-scale EV manufacturing plant – the BrightDrop facility. More recently, in 2023, GM Canada announced an investment of $280M to support next-generation internal combustion engine (ICE) truck production at its Oshawa Assembly Plant. In addition to increasing market capacity and ensuring a resilient supply chain in the province, the importance of these investments lies in saving over 2.6K jobs through modernizing and re-tooling existing facilities.
Honda

Honda began production at its first Canadian manufacturing plant in Alliston, Ontario in 1986, making it the first Japanese auto-maker to build a manufacturing facility in Canada. This plant has been the home of Honda Civic production since 1988. Since then, two more facilities have opened in Alliston – a second vehicle manufacturing plant in 1998, and an engine manufacturing plant in 2008 – and the Head Office Campus has opened in Markham. From its inception in 1986, Honda Canada has produced over 10M cars and light trucks.

Honda currently produces the following vehicles and parts at its plants in Ontario:

- Honda Civic
- Honda Civic Si
- CR-V – petrol and hybrid
- 4-cylinder engines

Production of the new Civic Hybrid Sedan will begin in Spring 2024. Through its operations, Honda Canada sources over $3B in goods and services from Canadian suppliers.

In 2022, Honda announced a significant investment of approximately $1.4B over a six-year period to upgrade its manufacturing plants. This latest investment supports Honda’s goal of reaching zero emissions by 2040 by upgrading its manufacturing plants in Alliston, retooling them to manufacture hybrid versions of the CR-V and the Civic.

In 2024, Honda announced an additional investment of $15B. This investment covers the introduction of three EV battery plants, along with a brand-new EV manufacturing plant in Alliston, which is expected to be fully operational in 2028. These four facilities are anticipated to create over 1K jobs.
Stellantis

Stellantis’ earliest operations in Ontario began in 1925, when the Chrysler Corporation of Canada Ltd was established in Windsor. Since then, operations have expanded to include its Windsor Assembly Plant, Brampton Assembly Plant and Satellite Stamping Plant, and Etobicoke Casting Plant.

The Windsor Assembly Plant produces the Chrysler Pacifica (including the plug-in hybrid model), Chrysler Voyager, and Chrysler Grand Caravan. In 2023 Stellantis confirmed plans for this plant to produce the next generation electric Dodge Charger. The Brampton Assembly Plant is currently undergoing retooling, with production expected to start in 2025. Once operational, the facility will produce the next generation Jeep Compass.

The Brampton Satellite Stamping Plant produces 96 inner and outer body stampings for doors, hoods, decklids, fenders and roofs, and the Etobicoke Casting Plant produces aluminium die castings for a range of Chrysler, Jeep, Dodge and Ram vehicles.

Stellantis also has a research and test facility in partnership with the University of Windsor. The Automotive Research and Development Centre is home to six road-test simulators, the Automotive Coatings Research Facility and the Automotive Lighting Research Facility.

In 2022, Stellantis announced investment of $3.6B to accelerate its plans for electrification in Canada. The investment enables development of the Windsor and Brampton Assembly Plants to produce flexible multi-energy vehicle architecture and an all-new electric model, respectively.

The company also committed to build a new EV battery modules and cells plant in Windsor, with construction currently underway. This investment of $5B, announced in partnership with LG Energy Solution under the name NextStar Energy Inc., is expected to create approximately 2,500 new jobs.
Toyota

In 1985, Toyota announced that it would build its first Canadian vehicle assembly plant, Toyota Motor Manufacturing Canada (TMMC), in Cambridge, Ontario. Toyota has continued to invest in Ontario with two major expansions. The first, announced in 1994, introduced a second vehicle assembly plant in Cambridge, Ontario that doubled TMMC’s capacity and employment. The second, announced in 2005, brought a third vehicle assembly plant located in Woodstock, Ontario. In 2018, Toyota announced that it would be investing $1.4B into its Cambridge and Woodstock assembly plants.92 This latest investment, which protects over 8K jobs and creates 450 new jobs, introduces a new advanced manufacturing platform for RAV4 production.93

In addition to the three vehicle assembly plants, Ontario is also home to the following Toyota facilities:

- Scarbough: Toyota Canada Inc., Sales and Marketing Headquarters and Regional Office, and Lexus Canada Inc.;
- Markham: Toyota Credit Canada Inc.; and
- Bowmanville: Eastern Canada Parts and Distribution Centre.

TMMC produces gas and hybrid versions of the RAV4, Lexus NX, and Lexus RX vehicles. Since 2014, TMMC has produced over 430K hybrid electric vehicles. This makes Ontario one of Toyota’s top producing manufacturing sites globally.94
7. About OVIN

OVIN is a key component of Phase Two of Driving Prosperity, the Government of Ontario’s ambitious plan that positions Ontario as a North American leader in developing and building the car of the future through emerging technologies and advanced manufacturing processes. The Government of Ontario has committed an additional $56.4 million, for a total investment of over $141 million to date, through OVIN’s innovative programming to support research and development (R&D) funding, talent development, technology acceleration, business and technical supports, and testing and demonstration.

OVIN, led by Ontario Centre of Innovation (OCI), is supported by the Government of Ontario’s Ministry of Economic Development, Job Creation and Trade (MEDJCT) and Ministry of Transportation (MTO).

The initiative comprises five distinct programs and a central hub. The OVIN programs are:

- Research and Development Partnership Fund
- Talent Development
- Regional Technology Development Sites
- Demonstration Zone
- Project Arrow

The OVIN Central Hub is the driving force behind the programming, province-wide coordination of activities and resources, and Ontario’s push to lead in the future of the automotive and mobility sector globally. Led by a dedicated team, the Central Hub provides the following key functions:

- A focal point for all stakeholders across the province;
- A bridge for collaborative partnerships between industry, post-secondary institutions, broader public sector agencies, municipalities, and the government;
- A concierge for new entrants into Ontario’s thriving ecosystem; and
- A hub that drives public education and thought leadership activities and raises awareness around the potential of automotive and mobility technologies and the opportunities for Ontario and for its partners.

To find out the latest news, visit www.ovinhub.ca or follow OVIN on social media @OVINhub
8. OVIN Objectives

- Foster the development and commercialization of Ontario-made advanced automotive technologies and smart mobility solutions.

- Showcase the Province of Ontario as the leader in the development, testing, piloting and adoption of the latest transportation and infrastructure technologies.

- Drive innovation and collaboration among the growing network of stakeholders at the convergence of automotive and technology.

- Leverage and retain Ontario’s highly skilled talent, and prepare Ontario’s workforce for jobs of the future in the automotive and mobility sector.

- Harness Ontario’s regional strengths and capabilities, and support its clusters of automotive and technology.
# 9. Meet the OVIN Team

## Automotive and Mobility Team

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
<th>Email</th>
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### Skills, Talent & Workforce Development Team

<table>
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<th>Name</th>
<th>Role</th>
<th>Email</th>
</tr>
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<tbody>
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10. Disclaimers

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11. References

1 Statistics Canada. (2023, November). Table 36-10-0402-01 Gross domestic product (GDP) at basic prices, by industry, provinces and territories (x 1,000,000). https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=3610040201


3 Government of Canada. (2024, January). Trade Data Online. https://www.ic.gc.ca/app/scr/tdst/tdst/tdotr.html?grouped=INDIVIDUAL&searchType=BL&naArea=9998&countryList=ALL&toFromCountry=CDN&reportType=TE&timePeriod=10%7CComplete+Years&currency=CDN&productType=NAICS&hSelectedCodes=%7C3361%7C3362%7C3363&runReport=true


6 Ibid.

7 Ibid.


9 Ibid.

10 Statistics Canada. (2023, November). Table 36-10-0402-01 Gross domestic product (GDP) at basic prices, by industry, provinces and territories (x 1,000,000). https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=3610040201

11 Ibid.

12 Ibid.
13 Statistics Canada. (2023, November). Table 36-10-0402-01 Gross domestic product (GDP) at basic prices, by industry, provinces and territories (x 1,000,000). https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=3610040201

14 Government of Canada. (2024, January). Trade Data Online. https://www.ic.gc.ca/app/scri/tdst/tdo/crtr.html?grouped=INDIVIDUAL&searchType=BL&naArea=9998&countryList=ALL&toFromCountry=CDN&reportType=TE&timePeriod=10%7CComplete+Years&currency=CDN&productType=NAICS&hSelectedCodes=%7C3361%7C3362%7C3363&runReport=true

15 Ibid.


17 Ibid.


19 Statistics Canada. (2024, March). Trade Data Online. https://www.ic.gc.ca/app/scri/tdst/tdo/crtr.html?reportType=T1&grouped=GROUPED&customYears=2023&searchType=KS_CS&timePeriod=%7CCustom+Years&currency=CDN&naArea=P35&countryList=DET&productType=NAICS&toFromCountry=CDN&hSelectedCodes=%7c3361%7c3362%7c3363&changeCriteria=true

20 Ibid.

21 Ibid.

22 Ibid.

23 Ibid.

24 Ibid.

26 Ibid.

27 Ibid.


Ibid.


Ibid.


61 Ibid.


66 Ibid.


72 Ibid.


Ibid.

Loulia Kouchaji. (2024, April). Email to Homeira Afshar, 4 April


Ibid.


Ibid.


Ibid.


89 Ibid.


93 Ibid.