

Request for Proposals | July 2022

## Ontario Vehicle Innovation Network (OVIN)

### Labour Market Research Insights: Skills, Talent & Workforce Strategy Update (Quarterly and Final Report).



*Deadline for submission of proposals: July 6<sup>th</sup>, 2022*

## 1. Organization Description

The Ontario Centre of Innovation (OCI), established in 1987, is a leading not-for-profit organization that works with industry, academia and government. OCI focuses on ensuring that the people of Ontario reap the personal and economic benefits of leading-edge research underway at our publicly funded universities, colleges and research hospitals - research that can be transformed into technologies and services that enhance quality of life and help build a globally competitive, job-creating economy in Ontario.

Specifically, OCI supports the commercialization of academic intellectual property (IP), industry-academic collaborations and the development and adoption of emerging technologies. This includes overseeing the execution of advanced technology platforms that will equip Ontario companies to compete in a competitive global digital economy.

OCI also supports and invest in early-stage projects where the probability of commercial success and investment return on innovation are substantial. OCI's strong expertise in de-risking innovation helps attract private investors and other funders to new ventures, bolstering their success

The organization also contributes to the development and retention of talent to ensure that industry has access to personnel with the most advanced skills and knowledge and that highly trained personnel find opportunities to apply their expertise in Ontario.

OCI leads Ontario's Ontario Vehicle Innovation Network (OVIN) initiative on behalf of the Government of Ontario. OVIN's mandate is to accelerate the development of the next generation of electric, connected, and autonomous vehicle and mobility technologies and lead the sector through significant change.

OVIN builds upon Ontario's position as a world-leading automotive manufacturing and supply jurisdiction, in addition to the large cluster of information and communication technology companies operating in the province. Ontario's high-quality post-secondary institutions, first class talent, innovative small and medium sized enterprises and infrastructure to support entrepreneurship ensure that the province is uniquely positioned to capture the economic opportunity of the connected and automated vehicle (C/AV) and mobility technology space and lead the global mobility transformation.

Through resources such as research and development (R&D) funding, talent development, technology acceleration, business and technical supports, and demonstration grounds, OVIN provides a competitive advantage to Ontario-based automotive and mobility companies – allowing Ontario to reinforce its position as a global leader in transformative automotive technologies, as well as transportation and infrastructure systems.

OVIN's five objectives are to: foster the commercialization of Ontario-made advanced automotive technologies and smart mobility solutions; showcase 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; harness Ontario's regional strengths and capabilities, and support its automotive and technology clusters.

OVIN is supported by Ontario's Ministry of Economic Development, Job Creation and Trade (MEDJCT), Ministry of Transportation (MTO), and Ministry of Labour, Training and Skills Development (MLTSD).

## 2. Objectives

Ontario is considered a world-leading jurisdiction on automotive manufacturing and smart mobility. The automotive sector is a key driver of Ontario's economy, contributing to 2.4% of Ontario's overall GDP. Ontario's automotive industry was ranked as North America's top auto producing region in 2017 and is the place where five of the top automakers – FCA, Ford, GM, Honda, and Toyota – produce more than 2.3 million vehicles per year. Additionally, Ontario is the second largest IT region in North America after Silicon Valley, with more than 20,000 IT companies, 46 colleges and universities, and 40,000 yearly graduates in fields of Science, Technology, Engineering, and Mathematics (STEM). The industry supports over 100,000 direct jobs, in addition to thousands of spinoff jobs, because of its integrated supply chain approach which has resulted in a thriving and growing automotive and mobility ecosystem in Ontario.

Ontario is also uniquely positioned for the global production and development of electric vehicles (EVs), building on the innovative technologies and futureproofing of automotive design in EVs and beyond. As Canada transitions to a decarbonized economy, investments in the electrification of Ontario's light-duty vehicle market would result in significant job creation and overall economic benefits. With commitments for all new EVs to be zero-emission by 2035 in Ontario, these direct and indirect benefits could result in more than 24,000 jobs and over \$3.4 billion in GDP across the province. The World Bank also predicts a 500% global increase in the production of critical materials, such as battery raw materials like lithium and cobalt. In 2019, the province of Ontario accounted for almost 25% of Canada's total mineral production. It is also a place where more than 700 automotive part manufacturers as well as more than 500 tool, die, and mold makers operate to produce high-quality automotive parts and components. This existing infrastructure is helping to create a singular EV economy in Canada that has the potential to be significant on a global scale.

Ontario's automotive and mobility sector is facing significant technological disruptions, driven by the priority to transition to the low carbon economy, as well as improvements in digital and automation technologies. Key drivers contributing to this evolution include factors like environmental sustainability, digitalization, infrastructure demands, increased expectations for safety and concerns over cybersecurity. As a result, the occupational and skills requirements for the sector are shifting to include an increased demand for: technological skills (ex: use of software tools and software development), data analysis skills (ex: machine learning and AI), as well as EV and EV infrastructure skills (ex: mechatronics, battery repair). To respond to these shifts, OVIN has developed a [Talent Strategy & Roadmap](#) which aims

to position the sector globally for long-term success. It outlines a series of objectives and initiatives to help achieve its 2030 vision for Ontario's Automotive and Mobility Workforce:

*“Ontario’s automotive and mobility sector has a highly skilled, adaptable, and diverse workforce reinforced by a global leading network that provides tailored and responsive initiatives that meet the evolving needs of the workforce.”*

Coupled with this, OVIN also developed a new [Skills & Career Navigator](#), a tool and centralized source of information designed to help Ontarians who are interested in or currently working in the sector better understand different career pathways based on their unique experience and skillset, and to share key labour market data and resources from across the province.

The initial project covered the following six sector segments across the automotive and mobility sector:

- Connected and autonomous vehicles (C/AV)
- Automotive and parts manufacturing
- Aftermarket, maintenance, and repair
- Freight and goods movement
- Tool, die and mold
- Mobility planning and infrastructure

As a next step, OVIN is seeking a vendor to conduct the following deliverables:

- 1) **Updated Quarterly Labour Market Analysis Report:** to update the Talent Strategy & Roadmap (TS&R) and Skills and Career Navigator to include updated labour market data on these six segments and new sector segments:
  - Electrification
  - Propulsion systems
  - Light weighting
  - Advanced Air Mobility (AAM)
  - Rail transportation
  - Update on the initial six segments
  - As well as any other sector segments that are emerging priorities

To inform and reinforce the update of the Talent Strategy & Roadmap, this comprehensive research will help to further identify the sector's current and future skills gaps across the province in various sector segments. This information will help to provide the necessary insights to update the TS&R and Skills and Career Navigator, equipping the sector's workforce and the future generation of talent with the skills, knowledge, and training to support the sector's evolution and to reinforce Ontario's competitive advantage as a world leading automotive and mobility jurisdiction.

- 2) **Skills, Talent, and Workforce Development Quarterly Market Report:** to support this work, OVIN also requires a report on research findings, insights, and data on current and forecasted labour market and skills data on the automotive and mobility sector locally, nationally, and globally. Specifically, a detailed review of:
  - a. K – 12 student programs and events
  - b. Upskilling and reskilling urgent needs vs. future needs – success and failures

- c. Work Integrated Learning opportunities that exist
  - d. Equity, Diversity, and Inclusion
  - e. Career navigation tools
  - f. Emerging education trends – curriculum development, micro credentialling, nano degrees, certifications, accreditations etc.
  - g. Data on the demographics of displaced automotive and mobility sector workers (including displacement because of COVID19)
  - h. Data on high school enrolment in post-secondary automotive and mobility post-secondary programs and career placement statistics for those same programs.
- 3) **Final report: including data, insights, and key findings (combined Sector Skills Current State and Future Forecasting).** To provide a comprehensive summary of all findings thus far and to provide direction on next steps for future labour market analysis.

OVIN is calling on interested and qualified Consultants and service providers to submit a proposal to deliver additional research elements in support of this project. The project consists of three key components outlined in Section 3.

### 3. Key Components and Requirements

The Consultant(s) will undertake data gathering and research activities as outlined below. To ensure that the information and research is aligned with the changing sector, this work will also require an update of the current labour market data for the six sector segments covered in the initial project: Connected and autonomous vehicles (C/AV), Automotive and parts manufacturing, Aftermarket maintenance and repair, Freight and goods movement, Tool, die and mold, and Mobility planning and infrastructure. Each of the research elements listed below must cover detailed data and information relating to the initial six segments and each of the following new, additional segments of the automotive and mobility sector in Ontario:

- I. **Electrification:** Replacing vehicle components that operate on a conventional energy source (such as coal, oil, and natural gas) with technologies that use electricity as a source of energy, in order to reduce overall carbon dioxide emissions and mitigate the impacts of climate change
- II. **Light weighting:** Using composite materials that are stronger, yet lighter than steel, in the creation of vehicles that will require less fuel and create fewer emissions, while also increasing the range from a single charge in EVs.
- III. **Propulsion systems:** A critical subsystem for an EV, consisting of an energy storage system, the power converter and the propulsion motor (and other controllers).
- IV. **Advanced Air Mobility (AAM):** AAM is a new system of aviation transportation that will employ new technologies, like Remotely Piloted Aircraft Systems, that allow people, goods, and services to move within urban, rural and regional areas
- V. **Rail transportation:** Ground-rail transportation systems are the essence of shared mobility and checks all the boxes of the four mobility megatrends: electric, autonomous, shared and connected. Funding and innovation opportunities focused on operations address things like safety and security, power supply, fuel cell power generation, asset monitoring and predictive maintenance, etc.

### 3.1 Sector Skills - Current state locally, nationally, and globally

This activity will provide OVIN with key labour market data to inform the update of the TS&R and Skills and Career Navigator covering the current state. Deliverables in this section will include:

- a. Sector-related job listings trends in Ontario (month-over-month change in the number of job listings in the last 12-24 months) to highlight:
  - Increase or decline in demand for specific roles
  - Impact of COVID-19 on sector-related roles
- b. Demand and supply of sector-related skills in Ontario (including information on geographic representation of these skills where possible)
  - Technical skills (e.g. data analysis, safety engineering, mechatronics)
  - Non-technical skills (e.g. communication, problem solving, management)
- c. Required degrees and level of education (e.g. High school diploma, PSI degree), specific credentials and certificates (e.g. professional association accreditation, technical/professional learning certificates) for sector-related occupations
- d. Existing sector-related education and training programs (external certificates, post-secondary programs, or third-party auto/mobility specific training programs) in Ontario and/or accessible to Ontarians (e.g. Online courses).
- e. Diversity and Inclusion data and insights
  - Establish a baseline of various diversity metrics for the sector in Ontario, including figures on underrepresented groups studying, working in, and in leadership positions in the sector. Underrepresented groups should include (but are not limited to):
    - Women
    - Black, Indigenous & people of colour (BIPOC) communities
    - 2SLGBTQ+
    - People with disabilities
    - Immigrants/refugees/newcomers to Canada
    - French-speakers
    - Those living in remote areas
    - Those living in under-served communities (in this context, populations of people who face additional barriers to accessing learning or educational opportunities such as those with low socio-economic status)
- f. Assessment of all collated data and providing key insights (e.g. current skills gaps, gaps in existing curricula compared to the in-demand skills, etc.).
- g. Work with OVIN to identify key categories of occupations (e.g. for electrification some groups of occupations may include EV maintenance, electrical engineers, EV bus drivers, etc.). These categories will be used to group in-demand skills and education and training requirements relevant to each.

### 3.2 Sector Skills - Future forecasting locally, nationally, and globally

This activity will provide OVIN with future skills requirements, help in understanding emerging skills gaps, and will set the stage for taking steps to address these gaps. Deliverables in this section will include:

- a. Foresight research on the automotive and mobility sector including:
  - Propose and apply a sound methodology that uses quantitative and qualitative measures to analyze the impact of the forecasted trends on the skills demands (e.g. growing and declining skills/roles) and the workforce in Ontario
  - Identifying how forecasted trends might impact the skills demand and Ontario's workforce in the automotive and mobility sector over the next 10 years
- b. Future skills forecast: Within each category identified above, identify the emerging sector-related skills (1, 3-, 5- and 10- year projections)
  - Technical skills (e.g. data analysis, safety engineering, mechatronics)
  - Non-technical skills (e.g. communication, problem solving, management)
- c. Required degrees (level of education), specific credentials and certificates for sector-related roles/skills, anticipated in the future to match skills gaps identified in forecasting research
- d. Diversity and Inclusion data and insights
  - Analysis on the potential impacts/benefits of increasing diversity in Ontario's automotive and mobility sector
- e. Assessment of all collated data including key insights (e.g. future skills gaps, key emerging skills areas, diversity and inclusion insights, etc.).
- f. Work with OVIN to identify key categories of occupations (e.g. for electrification some groups of occupations may include EV maintenance, Electrical engineers, EV bus drivers, etc.). These categories will be used to group in-demand skills and education and training requirements relevant to each.

### 3.3 Industry Survey

In addition to the research conducted on the current state and future forecasting, the Consultant will also develop a comprehensive industry survey to supplement and validate the research findings. The survey should include questions to adequately capture metrics from organizations within the automotive and mobility sector and validate findings related to the above metrics. This includes, but is not limited to:

- Key sector roles that are in demand, or anticipated to be in demand
- Impacts on the workforce as a result of COVID-19
- Representation of key skills and workforce education, experience and credentials of the current workforce
- Diversity, inclusion, and representation of key groups within the sector

### 3.4 Project Management

As part of the project management activities, the Consultant will prepare for a kick-off meeting, develop a workplan with detailed timelines for all project deliverables and deliver a status and/or weekly update meeting for the OVIN team.

## 4. Summary of Deliverables

The deliverables for this scope are summarized in the below table:

Section	Specific deliverable	Format
Project Management	1. Project kick-off deck	PowerPoint
	2. Project plan including schedule	PowerPoint and/or PDF
	3. Weekly project status updates	PowerPoint and/or PDF
Sector Skills - Current state Quarterly	1. Proposed research methodology outline (detailing assumptions and approach)	Word
	2. Raw data for all data points in this section. Data should be categorized as follows: a. Total for Ontario b. Breakdown by geographic location (where possible)	Excel
	3. All data visualized in data chart format (bar charts, pie charts and/or map for geographical representation)	Excel and PowerPoint
	4. Draft 'summary of key findings' report	PowerPoint or Word
Sector Skills - Future forecasting Quarterly	a. Proposed research methodology outline (detailing assumptions and approach)	Word
	b. Raw data for all data points in this section. Data should be categorized as follows: a. Total for Ontario b. Breakdown by geographic location (where possible)	Excel
	c. All data visualized in chart format (bar charts, pie charts and/or map for geographical representation)	Excel and PowerPoint
	d. Draft Future Forecasting report detailing methodology, research analysis and findings including data charts	Word or PowerPoint
Industry Survey	1. Proposed methodology for conducting Industry Survey (detailing approach including survey recipients)	Word or PowerPoint
	2. Draft and final industry survey for dissemination by Consultant & OVIN team	Format to be agreed with OVIN prior to Survey development
	3. Report including quantitative and qualitative analysis and graphic visuals from survey responses	Excel and PowerPoint
All	Final report including data, insights, and key findings (combined Sector Skills Current State and Future Forecasting)	Word or PowerPoint (data can be provided in Excel and attached as an appendix)

The Consultant must also account for the following requirements for all deliverables:

- All data visualization formats, and report format templates should be discussed and agreed with OVIN prior to the submission of the draft deliverable.
- An equity, diversity and inclusion (EDI) lens must be used in the crafting of content and the design and use of visual graphics across all deliverables
- All final deliverables must be provided in editable format (i.e. Word, PowerPoint and/or Excel), as well as PDF format (in addition to the format specified in the above table).
- OVIN and OCI branding must be included across all final reports. No other branding or logos may be included, unless agreed upon by the OVIN project team in advance

## 5. Timeline

The following timeline must be considered when developing the project workplan as part of the Consultant's response to this RFP. The Consultant(s) must further identify the overall approach to the project, work details, and schedule to complete all the required project tasks detailed in Section 4 (Summary of Deliverables). It should be noted that the selected Consultant(s) will work with the internal project team to finalize the work plan and confirm the timeline.

<b>Deadline for submission of proposals</b>	July 6 <sup>th</sup> 2022
<b>Decision by OCI</b>	July 22, 2022
<b>Project kick-off</b>	August 1, 2022
<b>Project workplan and approach to research activities</b>	August 1, 2022
<b>Sector Skills - Current State (Draft report)</b> <ul style="list-style-type: none"> <li>• Labour Market Quarterly Report</li> <li>• Skills, Talent, Workforce Development Quarterly Report</li> </ul>	Q1: August 31, 2022 Q2: September 30, 2022 Q3: December 31, 2022 Q4: March 31, 2023
<b>Sector Skills - Future Forecasting (Draft report)</b> <ul style="list-style-type: none"> <li>• Labour Market Quarterly Report</li> <li>• Skills, Talent, Workforce Development Quarterly Report</li> </ul>	Q1: August 31, 2022 Q2: September 30, 2022 Q3: December 31, 2022 Q4: March 31, 2023
<b>Research Support: Industry Survey Results Report</b>	April 30, 2023
<b>Sector Skills – Final Report (combined current and future forecasting)</b>	May 31, 2023
<b>Project closing</b>	June 2023

## 6. Bidding Requirements

- a. **Financial. Must include a breakdown of costs by activity (including things like different plug-ins required and enhancement options, etc.).** Daily rate for the project including any estimated expenses is to be provided. Any expenses or additional cost must be approved by OCI in advance and in writing.
- b. **Proposal.** Descriptions of the approach and methodology. Detailed timelines and deliverables are to be provided. 30-minute interviews including a presentation on approach and methodology and Q&A may be scheduled with short-listed candidates.
- c. **Collaborative Bids.** Proponents are welcome to submit collaborative bids in partnership with other vendors.
- d. **Service Level.** Delivery of milestones on time and of a quality acceptable to OCI.
- e. **Expertise.** CV and brief overview of relevant experience and qualifications of project team is to be provided.
- f. **Terms and Conditions.**
  - Any information provided by OCI either in this RFP or in subsequent verbal or written communications shall be considered confidential and for express use in the preparation of this proposal.
  - All proposals submitted become the property of OCI and are to be received and held in confidence.
  - All data collected and all resulting reports and publications prepared by the successful bidder will be the exclusive property of OCI.
  - This RFP does not create an employment relationship. Individuals performing services required by the contract are not employees of OCI.
  - Any changes to scope of services and associated costs following execution of contract must be submitted in writing and are subject to approval by OCI.
  - Travel and travel reimbursement are not authorized for this acquisition.
  - The successful bidder will be paid upon submission of proper invoices to OCI at the prices stipulated on the contract.
  - Invoices will contain the contract number and reference number.
- g. **Conflict of Interest.** Arms-Length relationship or disclosure of potential conflict of interest is required.
- h. **References.** References with details of work completed are to be provided

**Evaluation Criteria.** Proposals will be evaluated on the basis of:

### **Expertise & Diversity (40%)**

Successful bidders will ensure that those assigned to deliver this project reflect a diverse team of qualified individuals who will each have an active and intentional role in the work.

- CV and brief overview of relevant experience and qualifications of project team is to be provided.
- Understanding of the project objectives and context.
- Qualifications and expertise, including how you collaborate amongst team members through to project close.
- Relevant experience and references in research, future forecasting, and/or data analysis, preferably in automotive, technology and mobility sectors and/or the future of work.

### **Methodology (40%)**

- Proposed approach and methodology to the project, including budget per line item. Project timeline will be mutually agreed upon between successful vendor and OVIN.

- How well does the proposal address RFP requirements?
- Management and organization of the assignment.
- Commitment to assignment timelines, deadline, and overall terms and conditions.

**Cost (20%)**

- **Submission Format.** Proposals are to be submitted in free form electronically in Word and PDF format. Please have proposals named as “Company Name Submission OVIN\_Labour Market\_Reporting\_RFP\_DD-MM-YYYY”. The receipt will be confirmed via e-mail.
- **Contact.** Send proposals submissions and any questions and additional information requests to Natalia Lobo at [nlobo@oc-innovation.ca](mailto:nlobo@oc-innovation.ca). Please note that any responses may be shared with all potential bidders.

**Bidding Process and Schedule:**

1. The application deadline is Wednesday, **July 6, 2022, at 12:00pm EDT.**
2. Short-listed candidates may be invited for an interview.
3. Final selection is expected to be done by **Friday, July 22, 2022.**

We reserve the right not to award the contract to any of those submitting proposals, and we may seek further responses.