

# Talent Strategy & Roadmap

## Addendum

September 2024



# Contents

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<b>Executive Summary</b>	<b>3</b>
<b>Background</b>	
<i>OVIN and the Talent Strategy Roadmap Addendum</i>	<b>4</b>
<i>Approach and Methodology</i>	<b>6</b>
<i>Talent Needs in the Automotive and Mobility Sector</i>	<b>7</b>
<b>Labour Market Research</b>	<b>16</b>
<b>Update on Challenges &amp; Opportunities in the Sector</b>	<b>21</b>
<b>Talent Strategy Update</b>	<b>23</b>
<b>Implementation of the Talent Strategy and Roadmap</b>	<b>34</b>
<i>Talent Roadmap: Update and Next Steps</i>	<b>35</b>
<b>Next Steps</b>	<b>36</b>
<b>Work Cited</b>	<b>37</b>
<b>Appendix A: Glossary</b>	<b>39</b>

# Executive Summary

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Ontario continues to lead the charge in shaping the future of the global automotive and mobility industry, attracting significant investment and driving innovation across the sector. With recent announcements from industry giants like LG and Stellantis, Volkswagen and PowerCo, and Honda establishing new plants, with other notable OEMs re-tooling their facilities to prepare for EV production, Ontario is solidifying its position as a global leader in the shift toward electrification, laying the foundation for a future defined by sustainable mobility solutions.

To maintain Ontario's competitive edge in this rapidly evolving landscape, the automotive and mobility sector requires solutions that are dynamic, proactive, and adaptable. OVIN is taking the lead by introducing cutting-edge talent attraction, retention, and workforce development initiatives designed to strengthen Ontario's position on the global stage. These initiatives are not just about meeting today's needs but about future-proofing Ontario's workforce to ensure long-term sustainability and resilience.

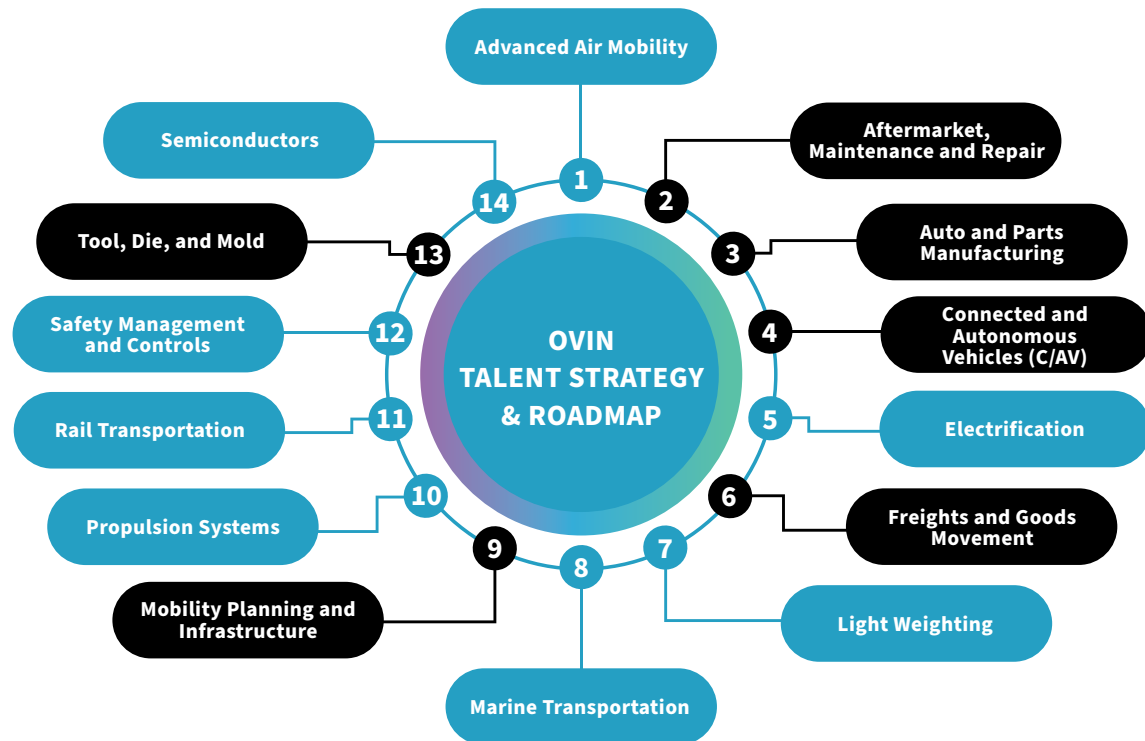
The future of Ontario's automotive workforce lies in its ability to navigate the ongoing transformation of the sector. As new technologies emerge, the demand for innovative research and talent development will grow exponentially. Employers must tap into diverse talent pipelines that include students, recent graduates, immigrants, and existing workers, ensuring the sector remains vibrant and adaptable to the challenges ahead.

Labour market research makes it clear that equity, diversity, and inclusion (EDI) are essential components in building this future workforce. Employers, educators, and government stakeholders must seize the opportunity to recruit underrepresented groups through apprenticeships, work-integrated learning, and sponsorship programs. Investing in these talent development strategies will be pivotal in attracting and retaining top talent, while preparing workers to continually adapt to technological advancements. Through collaborative efforts across Ontario's automotive and mobility ecosystem, we can build a workforce that champions continuous learning, innovation, and resilience, ensuring Ontario's leadership in the global mobility revolution.

# Background

## *OVIN and the Talent Strategy & Roadmap*

The Ontario Vehicle Innovation Network (OVIN) is a Government of Ontario initiative led by the Ontario Centre for Innovation (OCI), and supported by the Ministry of Economic Development, Job Creation and Trade (MEDJCT), the Ministry of Labour, Immigration, Training and Skills Development (MLITSD), and the Ministry of Transportation (MTO). OVIN is accelerating the development and commercialization of next generation electric, connected and autonomous vehicle and mobility technologies and supporting Ontario's role as the manufacturing hub of Canada, while leveraging critical minerals development in Ontario's North.



The purpose of this document is to update OVIN's Talent Strategy & Roadmap for Ontario's automotive and mobility sector from 2021 to 2030, covering fourteen sector segments (an additional eight from the original document are highlighted in blue in the above diagram).

The purpose of this document is to describe how OVIN is working to implement the objectives and priorities that will drive talent development and promote Ontario's automotive and mobility sector as a leading jurisdiction for attracting and retaining top talent. OVIN's Talent Strategy & Roadmap will help achieve Ontario's vision for the sector as outlined in [Driving Prosperity: The Future of Ontario's Automotive Sector:](#)

### **VISION:**

Strengthen and build on Ontario's North American leadership in automotive assembly and parts production. Position Ontario to be a leader in the development, commercialization and adoption of advanced manufacturing and mobility technologies.



The Ontario Vehicle Innovation Network (OVIN) is a Government of Ontario initiative led by the Ontario Centre for Innovation (OCI), and supported by the Ministry of Economic Development, Job Creation and Trade (MEDJCT), the Ministry of Labour, Immigration, Training and Skills Development (MLITSD), and the Ministry of

Transportation (MTO). OVIN is accelerating the development and commercialization of next generation electric, connected and autonomous vehicle and mobility technologies and supporting Ontario's role as the manufacturing hub of Canada, while leveraging critical minerals development in Ontario's North.

# Approach and Methodology

The Talent Strategy & Roadmap Addendum was developed through a review, assessment, and prioritization of a comprehensive set of inputs, including:



#### **Primary research:**

Consultations and surveys conducted with industry, academic and government stakeholders in the automotive and mobility sector.



#### **Secondary research:**

A labour market study on the sector's current and future skills gaps across the province; this research includes updated labour market data on both existing and



#### **Pilot research:**

Insights derived from OVIN-led pilots.

OVIN is committed to creating a world-class ecosystem for electric, connected, and autonomous vehicle technologies, while evolving with the sector and staying ahead of sector transformations and prioritized opportunity areas. This labour market study took an agile approach to updating the existing Talent Strategy and Roadmap, responding to real time impacts on the sector's labour market outcomes, and responding to the relevance and growth of other sector segments.



# Talent Needs in the Automotive and Mobility Sector

Ontario's automotive and mobility sector is facing significant technological disruptions, primarily driven by the national policy priority to transition to a low carbon economy. Labour market studies initiated by OVIN noted an increasing demand for digital skills, such as software design and development, and programming languages in the electrification and autonomous vehicle segments. Ontario needs to embed greater resilience in the sector's talent development approaches to remain proactive when addressing these future talent needs.

As detailed in Table 1 below, there is still a mix of technical and non-technical (general) skills currently in-demand across each sector segment. Some of the top emerging technical skills expected to be in-demand due to ongoing digital transformations across the sector include Javascript, Cloud computing, Linux, POS software, Oracle PeopleSoft, Warehouse/

Inventory Management systems, GIS, GPS, EDI systems, Macros, Routing software, PC\*Miller, PeopleNet, ERP software, Microsoft Visio, CRM software, Project Management software, SQL, Epicor, asTech, CAM software, CNC software, CMMS, Kronos, Autodesk Combustion, SAP, Microsoft Operating System, AI, and 3D Modelling.

Future state analysis indicates that high labour market gaps are expected in the following sector segments: freight and goods movement, propulsion systems, light weighting, auto and parts manufacturing, and safety management control. Additionally, given the high level of employment and expected growth over the next decade, sector segments such as advanced air mobility, connected and autonomous vehicles, freight and goods movement, mobility planning and infrastructure, and semiconductors can be seen as priority areas for talent development and attraction.

**Table 1** summarizes key insights with respect to current skill demands and gaps, as well as the future needs of the industry by each segment.

	<b>Current Top Skills In-Demand</b>	<b>Current Top Skills Gaps</b>	<b>Future Outlook</b>	<b>Emerging Top Skills In-Demand</b>	<b>Future Top Skills Gaps</b>
<b>Advanced Air Mobility</b>	In-demand technical skills include SQL, Cloud Computing, Java, JavaScript, Python. Top in-demand skills with tools are centered around forklifts, welding equipment and heavy equipment operation, primarily engaged in the production phases of eVTOL aircraft.	Technical skills with the largest gaps include cloud computing, SQL, and Java, all of which are commonly associated with engineering and technology roles. Non-technical skill gaps include self-motivation, communication, and language skills.	The outlook for a 10-year projection period shows an emerging skills supply of COBIT, reporting skills, and ISO 14000. These skills emphasize the importance of information technology management, environmental management, and the ability to effectively report results.	Emerging practical skills include die casting machines and ground penetrating radar for geophysical imaging and scanning. Emerging technical skills include digital skills related to geospatial processing and mining programs, and a continued demand for process control system software.	Future skill gaps include communication and presentation skills, organizational skills, experience with word processing software, project management software, accounting software, and point of sale software.
<b>Aftermarket, Maintenance, and Repair</b>	In-demand technical skills include POS systems, CRM software and Salesforce, relevant to aftermarket sales. Top in-demand skills with tools are centered around forklifts, engines and power tools used in repair work.	Technical skills with the largest gaps include micrometres and language skills. Non-technical skill gaps include communication, decision-making, and being able to work in a fast-paced setting.	The outlook for a 10-year projection period shows an emerging skills supply of staff development, online advertising, and user acceptance testing. These skills emphasize general business and management skills such as business systems analysis, general ledger understanding, and logistics management.	Emerging practical skills include experience using tools and knowledge of electrical and electronic systems such as switchboards and communication boards. Emerging technical skills include digital and analytical skills (which includes a range of software's), both in the near and long-term.	Future skill gaps include key digital skills such as knowledge of computerized maintenance management systems, maintenance software, eQUEST, and IBM Maximo.



	<b>Current Top Skills In-Demand</b>	<b>Current Top Skills Gaps</b>	<b>Future Outlook</b>	<b>Emerging Top Skills In-Demand</b>	<b>Future Top Skills Gaps</b>
<b>Auto and Parts Manufacturing</b>	In-demand technical skills cater to streamlining manufacturing processes using PLC, CMMS, and CAM. Top in-demand skills with tools are centered around forklifts, power, and measurement tools.	Technical skills with the largest gaps include micrometers, calipers, welding equipment, and power tools. Non-technical skill gaps include communication, teamwork, and attention to detail.	The outlook for a 10-year projection period shows an emerging skills supply of occupational health and safety act, business process, and financial reporting. A focus on general safety and business skills are expected to emerge in the skills supply.	Emerging technical and practical skills include experience using navigation equipment, protocol analysers and conductivity meters, electromechanical tools, and skills related to cybersecurity and data analytics technologies (e.g., Nessus, Nmap and Oracle Solaris).	Future skill gaps include non-technical skills like communication and organization. Future technical skill gaps include troubleshooting.
<b>Connected and Autonomous Vehicles (C/AV)</b>	In-demand technical skills include data tools, cloud computing and programming languages primarily used in information processing from sensors which is integral to CAV. Top in-demand skills with tools are centered around routers, PCB and vision systems that are used in CAV technologies.	Technical skills with the largest gaps include programming and data management (e.g., SQL). Non-technical skill gaps include self-motivation, communication and working in a team.	The outlook for a 10-year projection period shows an emerging skills supply of COBIT, reporting skills and project management life cycle.	Emerging practical skills include transmitters, ultra high frequency radio communication systems and map templates, experience using probe stations, network file servers and panel boards. Emerging technical skills include Riverbed technology (relating to IT infrastructure and cloud technologies), various routing technologies (e.g., PC Miller), digital skills relating to databases, data storage, analytics, and management.	Future skill gaps include non-technical skills like communication, presentation, and organizational skills. Key digital skill gaps include word processing software, presentation software, and productivity software, which exacerbate the non-technical gaps above.

	<b>Current Top Skills In-Demand</b>	<b>Current Top Skills Gaps</b>	<b>Future Outlook</b>	<b>Emerging Top Skills In-Demand</b>	<b>Future Top Skills Gaps</b>
<b>Electrification</b>	In-demand technical skills include data tools, cloud computing and programming languages required in the design and technical development stages of electrification. Top in-demand skills with tools are centered around power tools and heavy equipment operation primarily required in the battery production and EV manufacturing stages.	Technical skills with the largest gaps include cloud computing and technical planning. Non-technical skill gaps include communication, self-motivation, and decision-making.	The outlook for a 10-year projection period shows an emerging skills supply of COBIT, reporting skills, and financial analysis. The ability to understand business strategy and financial analysis are expected to emerge in the skills supply.	Emerging practical skills include experience with tools like digital readouts and limit switches, and knowledge of complex electrical and electronic tools such as reflow ovens. Emerging technical skills include software design and engineering skills for electric vehicles, and digital skills related to inventory management software.	Future skill gaps include non-technical skills like ability to learn, organization, communication, and multi-tasking. Technical future skill gaps include troubleshooting and knowledge of Autodesk Combustion.
<b>Freight and Goods Movement</b>	In-demand technical skills include Warehouse Management Systems and Inventory Control Software to track outgoing shipments. Top in-demand skills with tools are centered around forklifts and trucks for movement of goods, and navigation equipment for optimal routing.	Technical skills with the largest gaps include micrometres, language skills, and writing. Non-technical skill gaps include communication, self-starter, and working in a fast-paced setting.	The outlook for a 10-year projection period shows an emerging skills supply of KYC (know your client), business strategy, and financial risk. Technical skills including knowledge of financial analysis, general ledger, and process failure mode effects analysis are also expected to emerge in the supply of workers in the short to medium term (1-5 years).	Emerging practical skills include tools such as automated mail processing systems, sorting machines, and imaging systems. Emerging technical skills include experience with navigation software, optimizing routes or tracking cargo, and streamlining scheduling and rail applications through software (e.g., Jmeter).	Future skill gaps include multi-tasking, troubleshooting, ability to learn, organization, languages (e.g., Cantonese and Mandarin), and digital skills such as eQUEST software and Macros.

	<b>Current Top Skills In-Demand</b>	<b>Current Top Skills Gaps</b>	<b>Future Outlook</b>	<b>Emerging Top Skills In-Demand</b>	<b>Future Top Skills Gaps</b>
<b>Light Weighting</b>	In-demand technical skills include production and resource management software, Adobe Create Suite applications integral to vehicle design with lightweight materials. Top in-demand skills with tools are centered around forklifts, micrometers, and power tool operation.	Technical skills with the largest gaps include machine centers and soldering equipment. Non-technical skill gaps include self-motivation, communication, and teamwork.	The outlook for a 10-year projection period shows an emerging skills supply of Occupational Health and Safety Act, business process, and Information Technology Infrastructure Library. Other skills including vendor management and general ledger are also expected to emerge in the supply of workers in the short to medium term (1-5 years).	Emerging practical skills include experience using circular saws, oxygen concentrators, and bench drills, as well as skills relating to tools required for surface spatial imaging. Emerging technical skills include ERP software, cloud computing technologies (e.g., Citrix and VMWare), database management (Oracle Essbase), automation (Rockwell Automation), and designing (service-oriented architecture).	Future skill gaps include communication, English language, interpersonal, teamwork, multitasking and troubleshooting
<b>Marine Transportation</b>	In-demand technical skills include CAD software, Autodesk Revit, and Bentley MicroStation typically used in offshore structural analysis and modeling, and data processing for GPS signals and in GIS systems. Top in-demand skills with tools are centered around forklifts and trucks for the movement of shipments in commercial vessel operations.	Technical skills with the largest gaps include use of measurement tools and CAD software. Non-technical skill gaps include self-motivation, communication, language skills and teamwork.	The outlook for a 10-year projection period shows an emerging skills supply of facility management, The Open Group Architecture Framework, and business strategy. Other skills including Kanban and test-driven development are expected to emerge in the supply of workers in the short to medium term (1-5 years).	Emerging practical skills and tools include lifeboats, hydraulic control systems, waveform monitor skills, seismographs, waveform monitors and conductivity meters. Emerging technical skills include testing software maintenance and criticality, experience using testing software, and knowledge or programming logic controller.	Future skill gaps include organization, ability to learn, communication, multi-tasking, French language skills, and troubleshooting.

	<b>Current Top Skills In-Demand</b>	<b>Current Top Skills Gaps</b>	<b>Future Outlook</b>	<b>Emerging Top Skills In-Demand</b>	<b>Future Top Skills Gaps</b>
<b>Mobility Planning and Infrastructure</b>	In-demand technical skills include data management, cloud computing and computer programming. Top in-demand skills with tools are centered around routers, generators, PCB, and skylines.	Technical skills with the largest gaps include cloud computing, database management, and programming languages. Non-technical skill gaps include communication, self-motivation, and decision-making.	The outlook for a 10-year projection period shows an emerging skills supply of ICH guidelines, quality system, and COBIT. Other skills including behaviour-driven development and reporting skills are expected to emerge in the supply of workers in the short-term (1-5 years).	Emerging technical skills focus on aspects of passenger health and safety. Emerging digital skills include database and query software for fleet management and passenger ticketing systems.	Future skill gaps include communication, interpersonal skills, English language, teamwork, and eQUEST software.
<b>Propulsion Systems</b>	In-demand technical skills include tools integral in the modelling, design creation and optimization of propulsion systems. Top in-demand skills with tools are centered around forklifts, measurement tools and power tools used in the production of components and overall propulsion systems.	Technical skills with the largest gaps include machining centers and soldering equipment. Non-technical skill gaps include self-motivation, communication, and teamwork.	The outlook for a 10-year projection period shows an emerging skills supply of Occupational Health and Safety Act, Kanban, and business process. Other skills including Information Technology Infrastructure Library and general ledger are expected to emerge in the supply of workers in the short-term (1-5 years).	Emerging practical skills and tools include experience with combustion engines, load cells, distillation systems, dynamometer, battery chargers and emergency generators. Emerging technical skills include machine control systems, maintenance planning software, artificial intelligence and programming (e.g., Prolog and Autodesk MotionBuilder).	Future skill gaps include skills associated with workers collaborating with one another and utilizing language skills, such as communication and teamwork.

	<b>Current Top Skills In-Demand</b>	<b>Current Top Skills Gaps</b>	<b>Future Outlook</b>	<b>Emerging Top Skills In-Demand</b>	<b>Future Top Skills Gaps</b>
<b>Rail Transportation</b>	In-demand technical skills include managing scheduling, human resource management for smooth operations (e.g., SAP, ERP software, and Kronos). Top in-demand skills with tools include trucks and pallet jacks for movement of goods, and track switches and computer terminals for freight and passenger railway operations.	Technical skills with the largest gaps include use of measurement tools and technical planning. Non-technical skill gaps include self-motivation, communication, and language skills.	The outlook for a 10-year projection period shows an emerging skills supply of business intelligence, laboratory skills, and production part approval process. Other skills including software development life cycle, quality management systems, process failure mode effects analysis, and financial analysis are expected to emerge in the supply of workers in the short-term (1-5 years).	Emerging technical skills focus on aspects of passenger health and safety. Emerging digital skills are related to streamlining operations and human resource management, familiarity with technologies relating to fleet management and ADP Workforce Now.	Future skill gaps include skills commonly associated with collaboration and efficient workflow, as well as troubleshooting.
<b>Safety Management and Controls</b>	In-demand technical skills include CAD software, Solidworks, and Autodesk Revit integral to the design and testing phase of safety systems. Top in-demand skills with tools are centered around forklifts and power tools relevant to the production phases of vehicle safety systems.	Technical skills with the largest gaps include use of measurement tools and CAD software. Non-technical skill gaps include self-motivation, communication, language skills and teamwork.	The outlook for a 10-year projection period shows an emerging skills supply of User Interface design, business strategy, and product management. Other skills including internal audit and requirements analysis are expected to emerge in the supply of workers in the short-term (1-5 years).	Emerging practical skills and tools focus on various machining tools that are emerging with the advancement of safety management systems in automotive. Emerging demand for technical skills such as experience using software used for design and machining, such as Delcam and Tebis, as well as telemetry software used to measure temperature, pressure, speed, etc.	Future skill gaps include skills commonly associated with working collaboratively with others, as well as digital skills like experience with IBM Maximo and eQUEST software.

	<b>Current Top Skills In-Demand</b>	<b>Current Top Skills Gaps</b>	<b>Future Outlook</b>	<b>Emerging Top Skills In-Demand</b>	<b>Future Top Skills Gaps</b>
<b>Semiconductors</b>	In-demand technical skills include systems architectures (SoC, SiP, SoP, complex ASIC), data analysis, machine learning and artificial intelligence, and skilled trades (electricians, pipefitters, welders etc.) as well as electrical, chemical, and materials engineering to develop appropriate materials and devices.	While industry experts in Canada believe there is currently a sufficient supply of skilled workers from both education and immigration pathways, there is the potential for skills and talent shortages in the coming years – particularly if the industry expands and immigration pathways are disrupted. Some observers note that attracting workers to the industry can be a challenge since many professionals are more likely to seek opportunities in semiconductor-adjacent fields such as consumer technology and automotive.	Demand for semiconductors is anticipated to increase in the coming years. While the semiconductor industry largely has sufficient skills to meet current demand, skills and talent gaps will likely arise as the industry expands, facilities open in less well-connected locations, workers retire, and skills demand become increasingly complex. Should immigration pathways slow, skills and labour shortages will be particularly and immediately felt across the industry.	As production techniques become more advanced, semiconductor talent will be expected to have stronger skills in machine learning and artificial intelligence as well as the ability to carry out more advanced manufacturing processes and quality control. Adaptability will also be key as technology evolves.	Potential future skills gaps include advanced digital skills (AI, machine learning, data analytics, software programming), systems architectures, skilled trades, electrical and materials engineering skills, and cyber security.

	<b>Current Top Skills In-Demand</b>	<b>Current Top Skills Gaps</b>	<b>Future Outlook</b>	<b>Emerging Top Skills In-Demand</b>	<b>Future Top Skills Gaps</b>
<b>Tool, Die, and Mold</b>	<p>In-demand technical skills include CAD software for mold and die customization, and CNC for the adoption of tooling.</p> <p>Top in-demand skills with tools are centered around measurement tools, lathes and welding equipment used in mass production processes.</p>	<p>Technical skills with the largest gaps include generators and soldering equipment.</p> <p>Non-technical skill gaps include communication, self-motivation, teamwork, and attention to detail.</p>	<p>The outlook for a 10-year projection period shows an emerging skills supply of Occupational Health and Safety Act, financial reporting, and marketing strategy.</p> <p>Other skills including business process, general ledger, and marketing strategy are expected to emerge in the supply of workers in the short-term (1-5 years).</p>	<p>Emerging practical skills indicate an emergence in the demand for experience working with bulk carriers, swing stages and writing guides.</p> <p>Emerging technical skills include IDM Digital Analytics (business intelligence and data analysis software), ReactJS (open-source JavaScript library) and Drupal (open-sourced web content management system).</p>	<p>Future skill gaps include non-technical skills related to functioning in a collaborative environment such as English language, communication, and teamwork, as well as troubleshooting.</p>

# Labour Market Research

## *Equity, Diversity, and Inclusion (EDI)*

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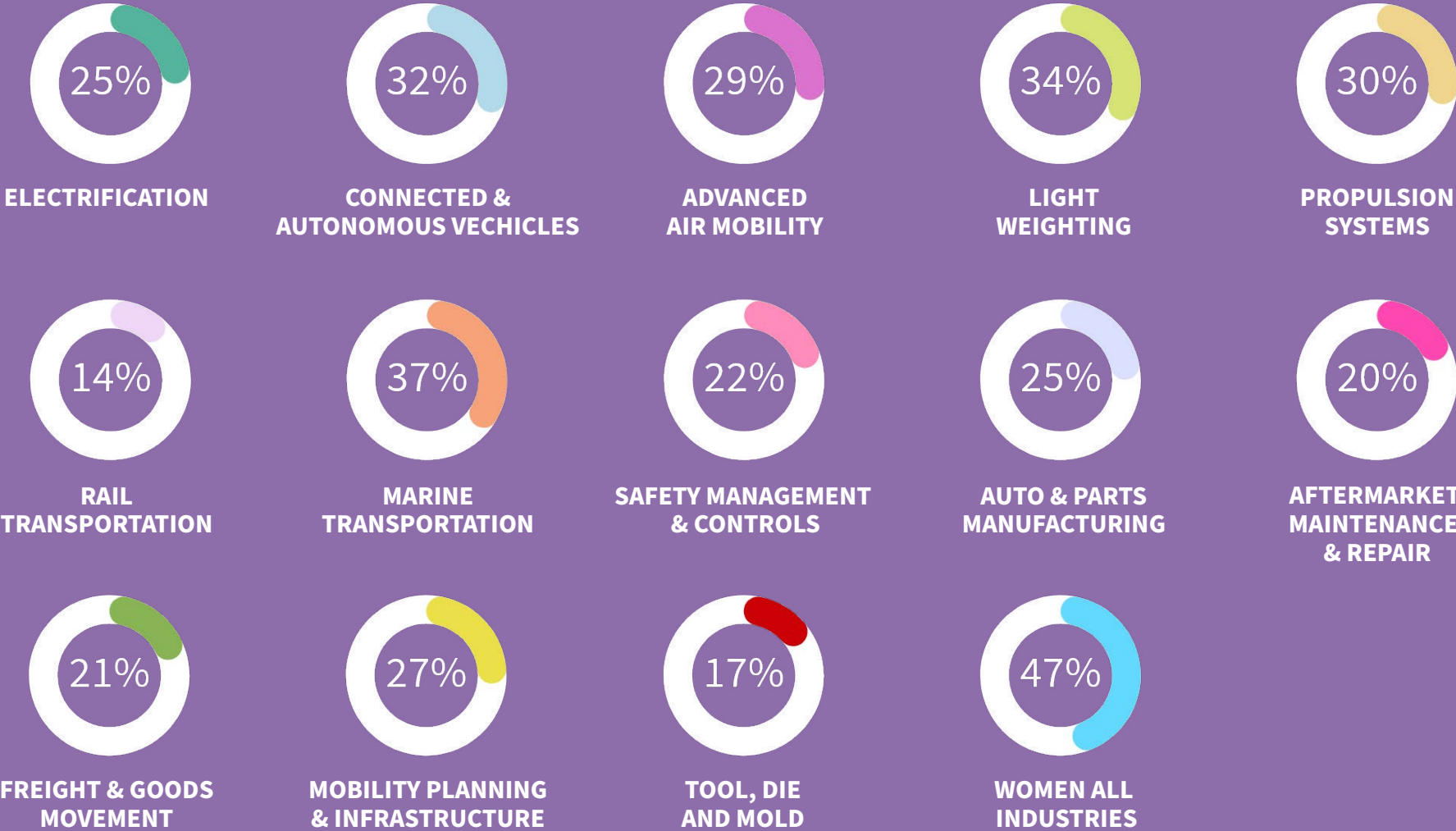
OVIN's labour market research has emphasized that more work needs to be done to foster equity, diversity, and inclusion (EDI) in the sector. Gender diversity is consistently low across all segments, which is a missed opportunity to fill occupation and skill gaps in the automotive and mobility sector with the advancement of women acquiring skills and education in the automotive and mobility field.





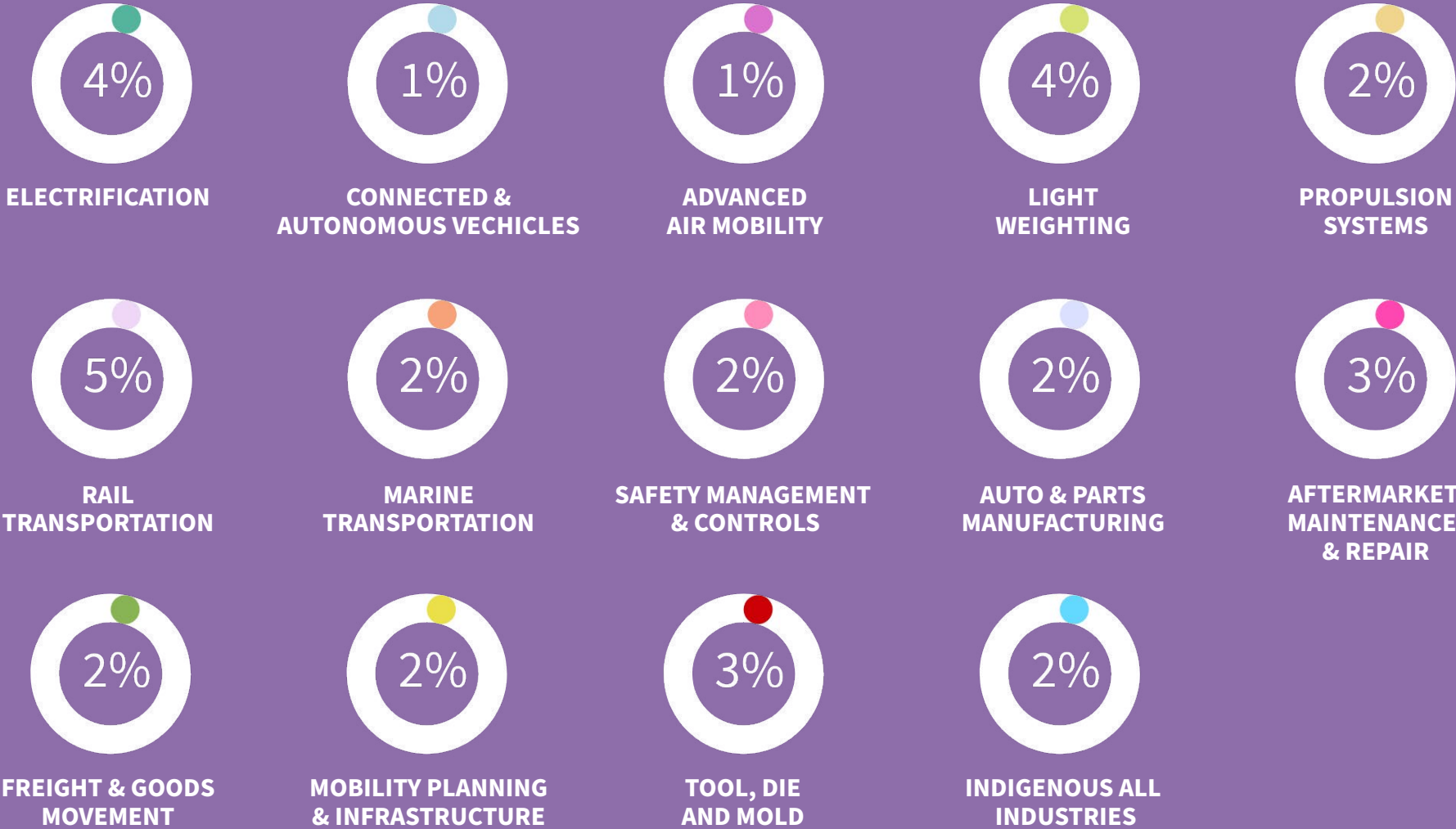
# FEMALE REPRESENTATION

As seen in the chart below, women's representation in all the sector's segments was lower than the workforce share of 47% of women in all industries as of 2021. OVIN's discussions with industry stakeholders have highlighted the need to remove stigmas that act as a barrier to women getting hired with certain industry employers.



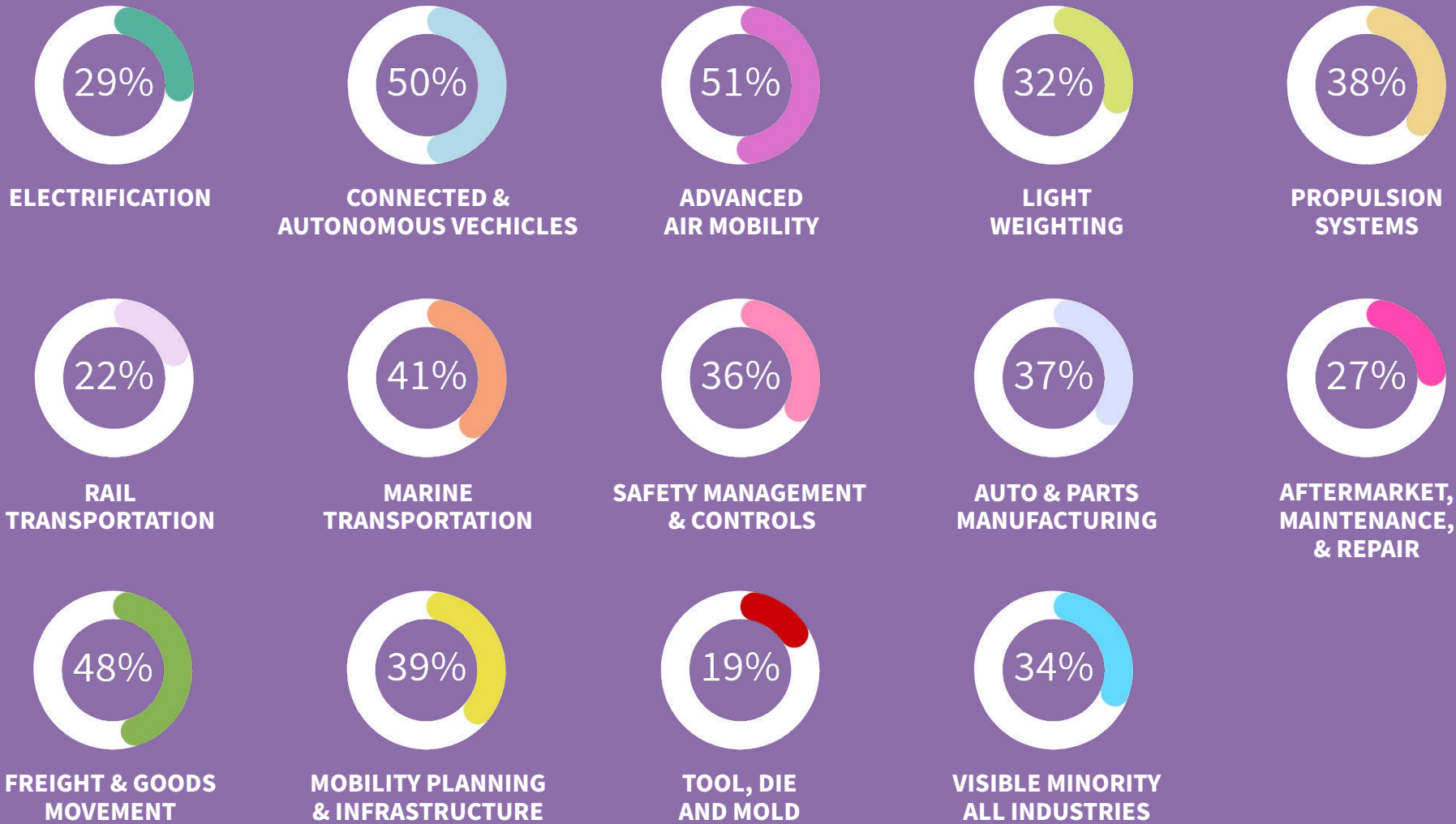
## INDIGENOUS REPRESENTATION

For Indigenous representation, the chart below shows some sector segments with a slightly higher workforce share than the Indigenous representation of the workforce share across all industries as of 2021. However, with a representation of less than 5% of the workforce share across all sector segments, more can be done to increase talent attraction, retention, and development opportunities for Indigenous peoples in Ontario.



## VISIBLE MINORITY REPRESENTATION

In terms of the representation of visible minorities in automotive and mobility sector segments, the chart below indicates some segments have a slightly higher representation than the share in all industries in Ontario as of 2021. However, visible minority representation is lower than average for Electrification, Light Weighting, Rail Transportation, Aftermarket, Maintenance and Repair, and Tool, Die and Mold.





Talent supply within the sector is expected to rely heavily on immigration and talent mobility. This is an area for opportunity - the uptake in skilled immigration in the automotive and mobility sector could have positive implications for narrowing skill gaps in the upcoming decade. However, more needs to be done to remove barriers to entry for immigrants such as the recognition of education, experience, and credential equivalencies, as well as supporting employers to navigate the bureaucracy of sponsorship opportunities.

Ontario is focused on meaningful collaboration with Ontario's talent development ecosystem is required to implement an inclusive talent strategy. In this way, OVIN continues to strive to incorporate EDI principals and the participation of underrepresented groups into its responses and initiatives. OVIN understands that to build a strong and resilient talent pipeline for the sector, it must be diverse and inclusive for all Ontarians.

# Update on Challenges and Opportunities in the Sector

OVIN's discussions with industry stakeholders have highlighted that they are preparing for the transition to electrification. One forthcoming change is the types of jobs that will be required to produce EVs instead of ICEVs; therefore, industry has identified the need for a **deeper understanding of the skills that will be required**. Ontario needs to arm itself with information on emerging skill needs so it can adequately build the talent pipeline the sector needs to grow and thrive. However, the analysis of labour market data and economic forecasts can only get us so far. Academia and government must work in tandem with industry to

continuously validate and share skill gaps and shortages so that ecosystem partners can amplify and action responses that meet the sector's future needs.

Canada's **changing demographics** continue to be a real risk to industry as experienced talent is retiring from the sector at high rates. Discussions with industry have stressed the importance of facilitating mentorship opportunities with more experienced workers and new talent entering the workforce. Supporting the transfer of skills and experience poised to leave the workforce is crucial and time sensitive.



**Competition for talent** remains a high for the automotive and mobility sector, both with adjacent industries and other jurisdictions. However, this competition also presents opportunity due to the high degree of transferable skills needed in the sector. Beyond offering competitive salaries, it becomes clear that fostering a positive workplace culture is integral for the retention of workers. This further prioritizes the need for employers to embrace equity, diversity, and inclusion principles and implement best talent management practices into their companies

Through our research, OVIN has observed the importance of ensuring interventions related to upskilling, reskilling or other

skills development efforts are targeting individuals who enter the automotive and mobility sector through **different pathways**.

Some of these pathways include:

- Individuals belonging to the workforce who may be at risk of displacement;
- Individuals coming from adjacent industries with transferable skillsets;
- New talent entering the workforce through economic immigration but lacking the recognized equivalencies; and
- Individuals belonging to equity-deserving and underrepresented groups who may face barriers to entry.

# Talent Strategy Update

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**The 2030 Vision:** Ontario's automotive and mobility sector will be powered by a highly skilled, adaptable, and diverse workforce, supported by a collaborative network of ecosystem stakeholders. These stakeholders are actively committed to equity, diversity, and inclusion (EDI), working together to advance shared objectives and deliver tailored, responsive talent development programs. This approach ensures that Ontario continues to lead in talent attraction, training, and retention, aligning with the evolving needs of the sector and supporting its long-term growth and resilience.

The following outlines the Talent Strategy and Roadmap's four key objectives and the nine targeted initiatives, each designed to secure Ontario's leadership in automotive and mobility talent development. The following highlights OVIN's progress toward achieving these objectives.



# Objective 1

**Collaboration & Coordination  
Across the Province**

## Initiative 1



Launch an Automotive & Mobility Curriculum Collaboration Committee for the automotive and mobility sector to support proactive curriculum development that reflects the rapidly evolving industry, and its corresponding talent and critical skills needs and requirements.

► **ONGOING**

Ontario, through OVIN, has created a working group, bringing together post-secondary institutions and industry leaders to ensure curriculum development remains aligned with the sector's evolving talent and skills requirements.





# Objective 1

**Collaboration & Coordination  
Across the Province**

## Initiative 2



Leverage existing automotive and mobility clusters to provide targeted skills and talent support while engaging regions beyond these clusters to enhance integration and collaboration.

▶ **COMPLETE**

Conducted a Roadshow with visits to post-secondary institutions across Ontario to raise awareness of Ontario's initiatives and to inspire collaboration with other ecosystem players.



## Objective 2

Talent Sourcing  
& Attraction

### Initiative 3



Enhance industry's engagement with elementary, secondary, and post-secondary students to increase awareness of automotive and mobility sector career opportunities and reduce stigmas associated with working in the sector.

► **COMPLETE**

Launched the Regional Future Workforce (RFW) Program, a pilot designed to spark and increase interest and awareness of the automotive and mobility sector with students from kindergarten through to post-secondary. Due to the success of this program, OVIN launched subsequent pilot programs: the RFW Empowering Equity in STEM pilot program and the RFW Critical Minerals pilot program, both focused on bridging the gap between equity-deserving and underrepresented students and the future automotive and mobility labour force.

► **COMPLETE**

Conducted a pilot with ChatterHigh, a platform that supports online learning through gamified quizzes, to engage grade school students on facts and career opportunities relevant to automotive and mobility.



## Objective 2

### Talent Sourcing & Attraction

## Initiative 4



Support the identification, attraction, and redeployment of talent from other sectors and jurisdictions that possess the transferable skills needed in Ontario's automotive and mobility sector.

▶ **COMPLETE**

Ontario, through OVIN, has conducted a labour market study of the automotive and mobility sector to shed light on the talent and education landscape, highlighting diversity gaps and providing critical insights for improving current initiatives and future offerings to improve EDI in the sector.

▶ **COMPLETE**

Completed a comprehensive Critical Minerals Talent Strategy, comprised of two reports that examine challenges and opportunities for Ontario's Critical Minerals sector amidst the EV transition.



## Objective 2

### Talent Sourcing & Attraction

## Initiative 5



Elevate awareness of and enhance work-integrated learning (WIL) opportunities within the automotive and mobility sector based on the needs of students, faculty, and employers.

▶ **COMPLETE**

Conducted a Roadshow with visits to post-secondary institutions (PSIs) across Ontario. This exercise has helped OVIN identify WIL, co-op, and apprenticeship opportunities at various Ontario-based PSIs.

▶ **COMPLETE**

Promotion of OVIN Learn's Skills & Career Navigator, an online tool developed to help Ontarians of all ages discover opportunities in the automotive and mobility sector at various stages of their career. This user-friendly digital tool collates PSI programs across Ontario relevant to automotive and mobility, and highlights WIL, co-op, and apprenticeship opportunities.

▶ **ONGOING**

Convening roundtable discussions with college and industry partners from across Ontario to develop strategies for more coordinated curriculum and student engagement in automotive technician training programs.



## Objective 3

### Workforce Development & Retention

## Initiative 6



Launch a digital upskilling platform to provide access to industry-recognized courses, micro-credentials, and learning resources, enabling Ontario's workforce to match the evolving skills required in the sector.

#### ► **COMPLETE AND ONGOING**

Developed OVIN Learn, a platform to provide a flexible solution for workers to access online upskilling resources. The platform will provide industry-recognized micro-credentials and maintain an up-to-date repository of curated training and educational materials that are readily accessible online as a means of providing resources that can be referenced throughout one's career development.

#### ► **ONGOING**

Launched the Content Partnerships Program, an initiative that will leverage partners in industry and academia to source and develop content for the OVIN Learn that will strengthen the workforce and increase resilience by targeting the sector's current and emerging in-demand skills and skill gaps.



## Objective 3

### Workforce Development & Retention

## Initiative 7



Develop a Reskilling Framework to guide the reskilling of displaced and at-risk workers, ensuring they remain relevant and employable in Ontario's rapidly evolving automotive and mobility industry.

► **COMPLETE**

Developed a Reskilling Framework, a guiding strategy to support the reskilling of displaced and at-risk workers. The framework will leverage industry engagement, labour market insights, and academic consultation to identify in-demand skills and occupations for at-risk roles, and present recommendations to address them.



## Objective 4

Equity, Diversity  
& Inclusion

### Initiative 8



Develop an EDI Advisory Committee for the sector to support the coordination and development of EDI-related initiatives, programs, and opportunities to ensure representative guidance and support for the automotive and mobility industry as it strives to achieve increased equity, diversity, and inclusion.

► **ONGOING**

Ontario, through OVIN, has formed an EDI steering committee to provide guidance and support on how OVIN's initiatives can increase equity, diversity, and inclusion in the automotive and mobility sector.



## Objective 4

Equity, Diversity  
& Inclusion

### Initiative 9



Collaborate with underrepresented communities to evaluate existing programs (e.g., related to talent attraction, learning and development) and develop approaches to program and initiative codesign to address community-specific barriers. Ensure that intersectional identities are appropriately represented and acknowledged in the design of EDI-related initiatives.

#### ► **COMPLETE AND ONGOING**

Increasing awareness of career opportunities in automotive and mobility for students belonging to equity-deserving and underrepresented groups was one of the core program objectives for OVIN's Regional Future Workforce program. The deployment of this program made it clear that there continues to be a need for EDI-focused programming and support in place for equity-deserving young Ontarians interested in careers in this sector.

#### ► **ONGOING**

OVIN has developed and continues to develop various pilot programs specifically focused on increasing equity, diversity, and inclusion in the sector. These programs include the RFW Empowering Equity in Stem program, the RFW Critical Minerals program, and the Accelerate Auto Workplace Showcase program.

#### ► **COMPLETE**

Developed a Talent Strategy for the Ontario's Critical Minerals Sector with a specific focus on systemic barriers that impact Indigenous talent and communities, as well as other equity-deserving and underrepresented groups.



By staying ahead of industry needs and fostering collaboration across all stakeholder groups, OVIN is driving the future of Ontario's automotive and mobility talent development. As we move closer to 2030, OVIN's strategic initiatives are building a resilient, diverse, and highly skilled workforce that positions Ontario as a global leader in mobility innovation.



# Implementation of the Talent Strategy and Roadmap

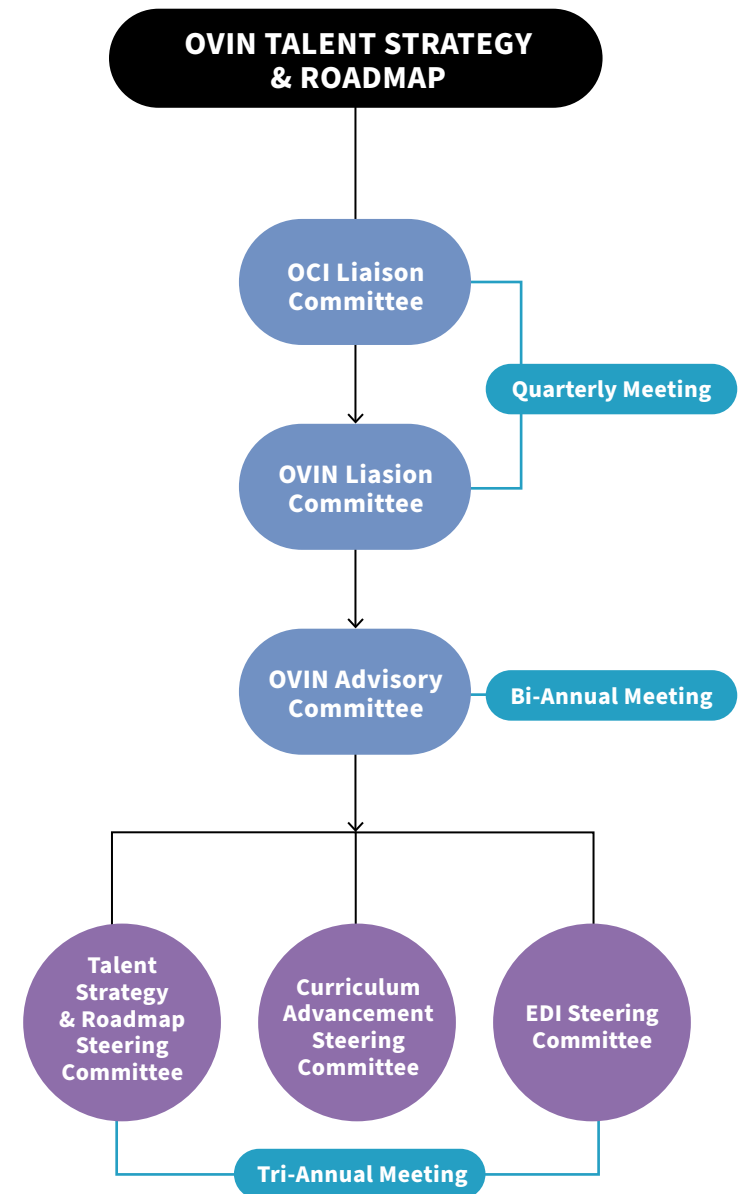
## Governance

To support the effective implementation of the Talent Strategy & Roadmap, a collaborative and inclusive governance structure is in development to support coordination.

OVIN's governance structure includes a broader Liaison committee with government of Ontario representatives, an Advisory Committee with subject matter experts, and three sub-committees for talent strategy, curriculum, and equity, diversity, and inclusion, to provide guidance and accountability

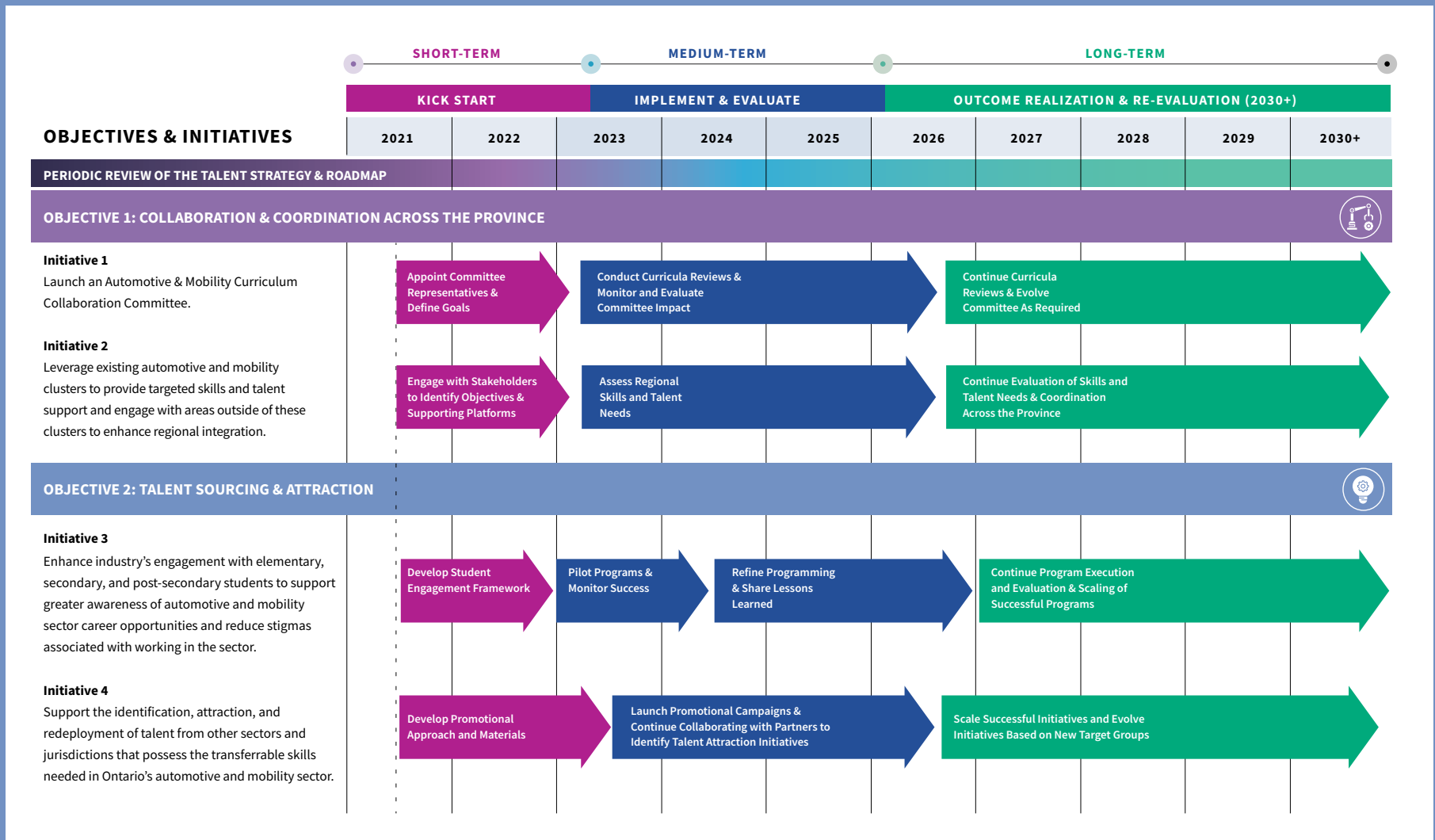
of results. OVIN also hosts a monthly Interministerial Meeting with representatives from MLITSD, MEDCJT, MTO, MCU, and ISED to provide input and guidance on OVIN's activities and other sector related issues.

OVIN continues to collaborate with industry partners and stakeholders and establishes specialized Working Groups relating to emerging project needs (e.g., Working Group for OVIN's Critical Minerals Talent Strategy).



# Talent Roadmap

## Update and Next Steps



# Next Steps

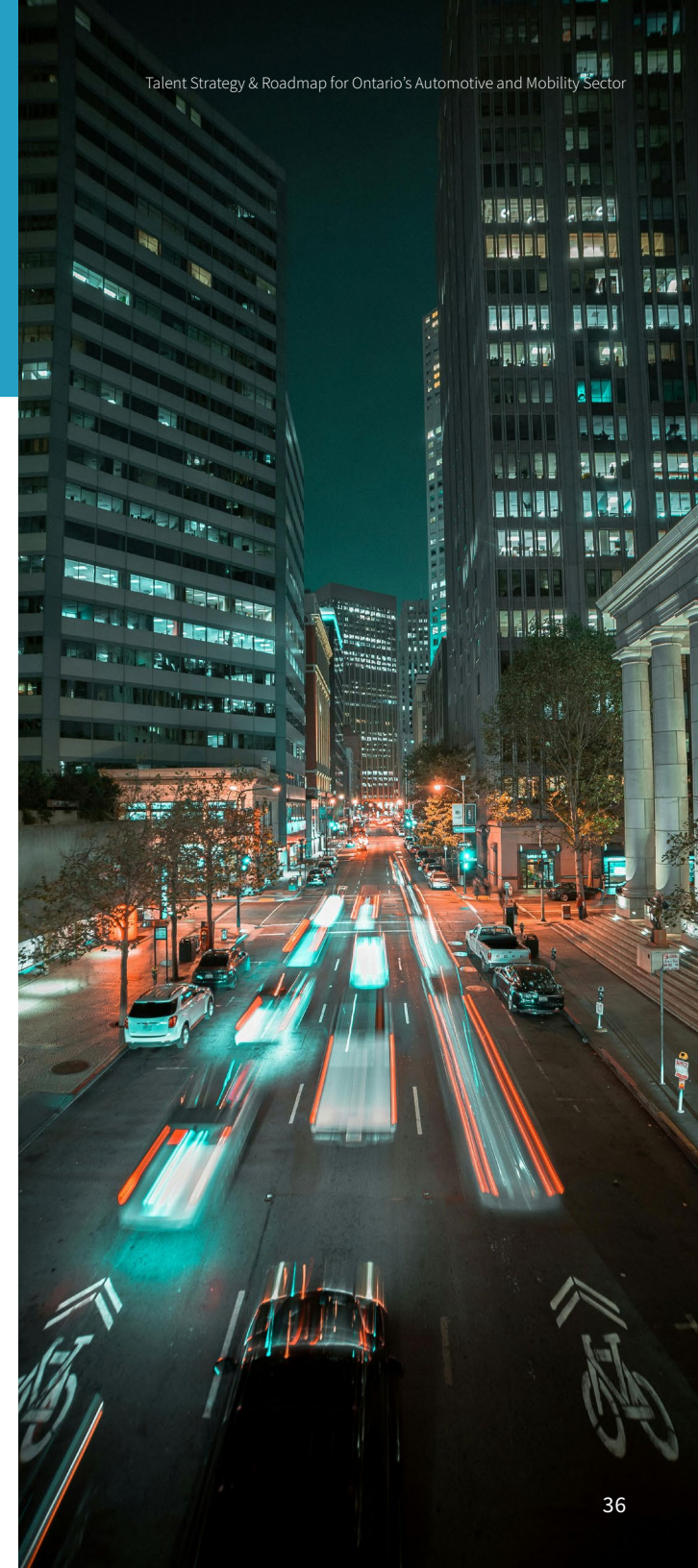
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This Talent Strategy & Roadmap is intended to inform a broader understanding and consideration of challenges and opportunities within the automotive and mobility sector, specifically related to talent. While there is broad consensus that the automotive and mobility sector will continue to evolve due to factors such as changing workforce supply and demand, the adoption of new business models, economic uncertainty, and unforeseen events (e.g., the COVID-19 pandemic), uncertainty remains regarding the magnitude and effect of transformation on future skills and occupations. For example, diverging opinions exist regarding the extent to which sector change will enhance workforce productivity or exacerbate skills gaps.

However, we know that individuals across Ontario will be impacted by sectoral and broader labour market changes differently depending on where they live, what sector they work in, and what their occupation and skills are. As such, this Talent Strategy & Roadmap is intended to

support the future proofing of Ontario's automotive and mobility sector workforce and the targeted efforts of partners and other sector stakeholders to respond to shifting workforce demands, including talent sourcing, attraction, development, and retention. To assist in the design of collaborative strategies to support workforce adaptability and resilience, the Talent Strategy & Roadmap has been designed as a living document. OVIN will conduct periodic reviews of the Talent Strategy & Roadmap and will consider whether updates are required to objectives, initiatives, or other elements based on new areas of focus (e.g., electric vehicles and lightweighting), existing workforce realities, and future trends.

OVIN will regularly monitor progress regarding the achievement of Talent Strategy & Roadmap initiatives. Progress snapshots will be provided in OVIN's thought leadership published on the Skills & Career Navigator and during OVIN's events.



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# Appendix A

## Glossary

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**Aftermarket, Maintenance, and Repair:**

Auto inspection, repair, replacement and service of mechanical, electrical, and electronic systems and components by motor vehicle dealers, garages, fleet maintenance companies, service stations, and automotive specialty shops.

**Auto and Parts Manufacturing:**

The manufacturing and assembly of auto parts, including transmission and power train components, engines and engine parts, body parts and trim, electronics, braking systems, and steering and suspension components.

**Connected and Autonomous Vehicles (C/AV):**

The research, design, development, testing, and operation management of connected and autonomous vehicle technologies for cars, shuttles, trucks, buses, delivery vehicles and drones.

**Diversity:** When many different types of people are included in something.

**Diverse Workforce:** Workforces comprised of individuals who have an array of identities, abilities, backgrounds, cultures, skills, perspectives, and experiences that are representative of Canada's current and evolving population. Involves the empowerment of people by respecting and appreciating what makes them different.

**Freight and Goods Movement:** The transporting and warehousing of goods and the provision of logistics services. Includes four transportation modes (trucking, rail, air, and marine) as well as postal services, couriers and messengers, and warehousing and storage.

**Inclusion:** The act of including someone as part of a group. The practice of ensuring that all individuals are valued and respected for their contributions and are equally supported.<sup>168</sup>

**Inclusive Workplace:** A fair, equitable, supportive, welcoming, and respectful workplace that recognizes, values and leverages differences in identities, abilities, backgrounds, cultures, skills, experiences, and perspectives. Involves an organizational effort and practice where different groups and individuals with diverse backgrounds are “culturally and socially accepted and welcomed, and equally treated” in an organization.

**Mobility Planning and Infrastructure:**

The planning, design, development, management, and operation of mobility services and associated infrastructure. Includes roads, public transit, Intelligent Transport Systems (ITS), shared mobility services and the built environment.

**Regional Technology Development Sites**

**(RTDS):** Physical sites across Ontario that bring together post-secondary institutions, regional innovation centres, incubators/accelerators, municipal and regional resources, industry, and other regional collaborators to support SMEs in the development, testing, prototyping, validation and commercialization of automotive technology and smart mobility solutions. Located in Waterloo Region, Ottawa Region, Hamilton Region, Durham Region, Windsor-Essex Region, Toronto Region, and the newly added Northern RTDS that includes Greater Sudbury, Thunder Bay, Timmins, Temiskaming Shores, Sault Ste. Marie, and North Bay.

**Reskilling:** Learning in the service of an outcome (e.g., effectively transitioning into a new job or successfully completing new tasks). Involves the development of job-specific technical skills in addition to core competencies (e.g., collaboration, communication).

**Safety Management Controls:** the systems, policies, programs, practices and procedures used by a motor carrier to ensure compliance with the applicable safety and hazardous materials regulations which ensure the safe movement of products and passengers through the transportation system, and to reduce the risk of highway accidents and hazardous materials incidents resulting in fatalities injuries, and property damage.

**Tool, Die, and Mold:** Making, repairing, and modifying custom-made, prototype or special tools, dies, jigs, fixtures, and gauges using various metals, alloys and plastics which require precise dimensions.

**Underrepresented Group:** Group that receive unequal access to or are excluded from participation in employment, services, or programs due to systemic barriers (e.g., institutional-level policies, practices, traditions and/or values).

**Upskilling:** Providing an individual with more advanced skills through additional education and training.



