





Automotive WORKFORCE DEVELOPMENT STRATEGY 2016









EXECUTIVE SUMMARY

To future proof the success of New Zealand's automotive workforce, this strategy has been developed to provide a framework for the automotive industry to plan its workforce development priorities over the next 5 - 10 years.

This strategy describes the automotive industry's operational context by highlighting factors that will continue to influence the current and future shape of the automotive industry. The strategy presents a number of goals underpinned by aspirational strategies. These aim to support the skill development priorities over the next 5 - 10 years and will:

- 1. promote career pathways that encourage participation and retention in the automotive industry
- 2. attract a sufficient supply of talent to meet industry requirements
- 3. build on existing skill-sets to enhance management and leadership within industry
- 4. support skill development necessary to meet future technological requirements; and
- 5. support skills utilisation in a workplace setting.

MITO's business workplan will align with these priorities to deliver a workforce to meet the future skill needs of the automotive industry. This strategy has been endorsed by automotive industry associations.

Janet Lane Chief Executive MITO

Neil Pritchard General Manager COLLISION REPAIR ASSOCIATION

and Vise

David Vinsen Chief Executive IMVIA

Lance Anderson Chairman AADS NEW ZEALAND

Neville Boyd President VEHICLE SERVICE FEDERATION

David Crawford Chief Executive Officer MOTOR INDUSTRY ASSOCIATION

ray

Craig Pomare Chief Executive MOTOR TRADE ASSOCIATION

Keith Wood Executive Director NEW ZEALAND ENGINE RECONDITIONERS ASSOCIATION

all

Ron Gall () General Manager TAMA - TRACTOR AND MACHINERY ASSOCIATION

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Bill Newson National Secretary E tū

INTRODUCTION

Education and training are enduring traditions of the automotive industry.

In a competitive economic environment the automotive industry faces increasing challenges to attract and retain skilled employees. The largest single occupation within the automotive industry are technicians, they represent 46%¹ of the total automotive industry workforce. New Zealand's automotive industry comprises the automotive repair, automotive maintenance, automotive electrical, automotive sales, specialist vehicle manufacture (collectively termed the 'automotive sector'), and the collision repair and refinishing sector.

Technology and its adaptation are central to the automotive industry's sustainability and future success. Intelligent Transport Systems (vehicular and infrastructural) are becoming, and will continue to be, commonplace as technology advances.

E-commerce is shaping the automotive industry in the way customers transact. As the demand for efficiency increases in the sector, e-commerce will be increasingly important and necessary for businesses to maintain a competitive edge.

The automotive industry has been a benefactor of New Zealand's strong economy. In 2015, the automotive industry contributed \$1.1 billion to New Zealand's Gross Domestic Product (approximately 1.87%) and accounted for 2.8% of the workforce ¹. Business and employment growth has been marginally more positive than the broader economy, with the exception of the collision repair and refinishing sector. There were record vehicle sales for NZ new vehicles. Commercial vehicles sales were particularly strong and netted an overall 52% increase over the last decade.

Regionally the automotive industry is prominent in New Zealand townships. In 2015 there were 12,611 reported business units. Over one third of those business units are located in the Auckland region. Canterbury recorded the second largest density followed by Waikato and Wellington, respectively.

Occupations - Automotive (top 5)¹





15,863 Motor mechanic





2,667 Diesel motor mechanic



1,825 Chief executive or managing director



1,812 Office manager

Occupations - Collision Repair and Refinishing (top 5)¹



1.231

Vehicle painter

3,059 Panelbeater



590

Car detailer



464 Industrial spray painter

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415 Office manager

AUTOMOTIVE - TOTAL BUSINESSES 12,616 Business Regions - Automotive (top 5) ¹



Motor Industry GDP¹



Industry Training Participation

COLLISION REPAIR - TOTAL BUSINESSES 2,402

and Refinishing (top 5)¹

860 Auckland

260 Waikato

168 Bay of Plenty

178 Wellington

304 Canterbury

Business Regions - Collision Repair



7.5% of the automotive industry engaged in MITO training.

Average Salary (2013) 1



\$3.6 billion Automotive sector



\$648 million Collision Repair and Refinishing sector



Automotive sector:

\$51,244 an annual increase of 3.2%

Collision Repair and Refinishing sector:

\$44,993 an annual increase of 3.7%

FACTORS THAT WILL SHAPE THE INDUSTRY OVER THE NEXT 5-10 YEARS

Changing technological and environmental Government initiatives, strong vehicle demand, changing workforce demographics and a society that is increasingly environmentally aware will require an automotive industry that is responsive, adaptive and innovative to ensure continued success when planning their workforce requirements.

1. Technology and Innovation

Technology and its adaptation are central to the automotive industry's sustainability and future success.

Technology will continue to evolve and grow. Predictive technologies are increasing, smarter technology based transport infrastructures are becoming an integral part of transportation strategies and the emergence of self-driving vehicles will have an influence on the future shape of our vehicle fleet.

Given the rapid rate of technological advancement, training needs to ensure it is agile, adaptive and responsive. Training needs to be a key strategy for industry to ensure it is well positioned to support Intelligent Transport Systems and ongoing technological advances.

Intelligent Transport Systems

The Ministry of Transport launched the Intelligent Transport Systems Action Plan 2014-2018,⁵ which details how Intelligent Transport Systems will be introduced across the transport network - including New Zealand's automotive industry. Along with central and local governments, the automotive industry is a key stakeholder in the Intelligent Transport Systems' implementation. The speed at which the technology is developing means stakeholder collaboration is essential to ensure the benefits of Intelligent Transport Systems are realised.

New technology will place increasing demands on the automotive workforce to service and maintain vehicles. There will likely be advances in diagnostic and repair technology, which may have implications for skill and knowledge requirements.

Electronic Commerce and Productivity Tools

In 2013, 76.8% of households had access to the Internet.⁶ The way in which the Internet is being accessed is evolving; laptops have overtaken desktop computers; while use of Internet-enabled mobile phones is increasing rapidly. Mobile devices and social media are expected to have an increasingly stronger presence in how consumers research potential purchases. Customers expect to have immediate access to information throughout the sales chain with digital channels being an increasingly important business strategy for business.

This level of connectivity is a prime opportunity for businesses within the automotive industry to develop e-commerce strategies and implement a range of technologies that will enhance their businesses and improve the customer experience.

2. Environment

The transport sector is a large producer of greenhouse gases. It represents 20% of New Zealand's total greenhouse gas emissions each year, and 40% of New Zealand's greenhouse gases from the energy sector ⁸. Diesel is the primary fuel used for commercial transport and is strongly linked to the nation's economic performance, whereas petrol is predominately consumed by private vehicle owners. ⁹ Both contribute to greenhouse gas emissions. Vehicle manufacturers are constantly developing, trialing and implementing new ways to reduce carbon emissions. For example, engines and drive-trains that reduce fuel consumption have been available in vehicles for some time. In addition, modern exhaust systems are reducing emissions, and will eventually replace older, more polluting vehicles.

Biofuels

Many vehicle manufacturers have invested in emissions control technology to improve air quality, while ensuring vehicles can operate on a diverse range of alternative fuels. Biofuels are fuels produced by renewable material, such as plant or animal waste, and are partial or complete substitutes for fossil fuels.¹⁰ They are cleaner for vehicle engines and the environment, and most modern vehicle engines are compatible. The automotive workforce will increasingly need an understanding of alternative fuels and their implications for vehicles.

Electric/Hybrid Vehicles

Electric vehicles are those that are wholly powered by chargeable batteries, whereas Hybrid Electric Vehicles run on either batteries (that can be plugged in to re-charge) or an internal combustion engine.¹¹

As of 15 October 2016, there were 2,029 light electric vehicles registered in New Zealand, up from 527 in August 2015. ¹² The Government is committed to encouraging the uptake of electric vehicles because of their fuel efficiency, minimal reliance on fossil fuels, and ability to reduce transport greenhouse gas emissions.

The government aims to have 64,000 electric vehicles in use in New Zealand by 2021.

3. Political and Government

There are a number of government initiatives that shape the automotive industry. The Government has implemented various mandates to ensure all vehicles entering the fleet are fitted with appropriate safety features and emissions control technology.

The Land Transport rules require that all new vehicles must meet safety emissions and frontal impact standards.¹³ The Government's Safer Journeys Strategy to 2020¹⁴ outlines priority actions for improving road safety with most actions relating to road user behaviour and road infrastructure.

These and other Government strategies are shaping the future political landscape for the automotive industry and may present significant challenges in some parts of the sector. There is an increasing compliance burden on small businesses.

4. Vehicle Demand

Demand for vehicles, both private and commercial, is strong. This is balanced with the continued promotion of non-automotive vehicle public or alternative transport, increased urbanisation and fewer young people obtaining drivers' licenses. Globally, the number of vehicles manufactured and sold is growing, ¹⁵ and New Zealand is experiencing record numbers of vehicle registrations.¹⁶ This will sustain the demand for the services supplied by the automotive industry for the foreseeable future.

New Zealand's licensed vehicle fleet (top 5) ²





13%

Goods van/truck/utility



2% Motorcycle



0.9% Tractor

68% Passenger car/van

14% Trailer/caravan



Vehicle fleet age 4



14.1 years is the average age of the light vehicle fleet



17.5 years is the average age of the truck fleet

NZ new



In 2015 there were record vehicle sales for NZ new vehicles:

95,099 (passenger) **39,135** (commercial) That's a **22%** and **52% increase** from 2005. **Global Vehicle Production**³



84 million vehicles produced annually, generating \$5 trillion turnover. Averaging

4% growth

Total Registrations (NZ new and used imports)



vehicle registrations in NZ.

That's a **67% increase** from 2010 (11% per year) and **6% from 2005** (0.57% increase per year)

The average age of light (i.e. private) vehicles is 14.1 years, heavy trucks are 17.5 years and buses are 17.4 years.¹⁷

There are considerable consequences to having an older/ageing vehicle fleet. For example, older vehicles tend to be more polluting and not equipped with the latest safety features, making them more environmentally harmful and less safe. The New Zealand Government and broader automotive industry has a series of initiatives to help address these issues, for example: The Safer Journeys Strategy to 2020; and the Land Transport Rule: Vehicle Exhaust Emissions; Light Vehicle Brake rule; and ESC provisions.

Vehicle Imports

Vehicle imports into New Zealand are worth \$6.5 billion annually and account for 10% of the country's imports.²² Approximately 130,000 used vehicles were imported into the country in 2014.²³ This increased to approximately 150,000 in 2015; ¹⁶ conversely the number of the vehicles sold in New Zealand has been increasing since 2010.

Road Freight

The movement of freight is fundamental for supporting the movement of New Zealand's exports and international imports. The amount of freight transported by road is forecast to grow by 58% (compared to 51% for rail and 81% for sea)²⁴ over the next thirty years. This is likely to increase the demand for vehicles required to move freight and will ensure the medium-term sustainability of automotive businesses that support the commercial transport industry, and provide opportunities for others to service that market.

5. Skills and Career Pathways

The complex environment, including advances in technology within which the automotive industry operates, has considerable implications for the future workforce numbers and its skill and knowledge development.

New Zealand has an aging vehicle fleet - attributed to fewer vehicles being scrapped and improved mechanical reliability. This suggests the country's fleet is likely to continue to age over the next few years. While this has negative social (i.e. safety) and environmental (i.e. emissions and higher fuel consumption) implications, it maintains the demand for the existing skill sets in the automotive industry.

However, more new vehicles are starting to enter the fleet, and the Government has implemented various mandates to ensure all vehicles entering the fleet are fitted with appropriate safety features and emissions control technology.

This will require the industry to develop the skills, knowledge and expertise to appropriately sell, repair and service vehicles with new and emerging technologies. The industry will need to be agile and adaptive, evolving its skill and knowledge requirements accordingly.

Integral to future training and development are qualifications that equip the workforce with the skills needed to succeed. MITO New Zealand in collaboration with industry have developed a new suite of qualifications for the automotive industry, registered on the New Zealand Qualifications Framework.

The qualifications provide clearly defined career pathways. These are crucial to encouraging participation and retention in the industry. With a diminishing pool of young people entering the New Zealand workforce in general, it will be important to have a focus on vocational pathways and school-to-work transitions.

Employment¹



Gender¹



Qualifications¹



Automotive sector

MITO Apprentice Profile

Age on enrolment



6. Changing Workforce

New Zealand's population is becoming increasingly culturally diverse. Continued investment in people, will ensure a workforce that is valued and responsive to change.

Eighty per cent of the automotive industry's workforce comprise European males. This is significantly greater than the general workforce population (53% male).

In 2031, the New Zealand workforce is anticipated to reflect 56% European, 18% Asian, 17% Māori and 9% Pasifika. New Zealand's Asian population is shaped by migration and forecasted to account for 60% of its growth over the next decade.

37% Level 4

Collision Repair and Refinishing sector

19% No qualification

Given the impending demographic change, gender and ethnic diversification should be considered, given the changing nature of the New Zealand workforce and the automotive industry's customers.

The New Zealand workforce is ageing and the proportion of young people entering the workforce is declining. Statistics New Zealand indicate that by 2061 there will be less than 3.3 million people in the workforce; 13% will be aged 15-24 years; 37% aged 25-44 years; 36% aged 45-64 years and 14% aged 65 and over.

In 2013, the average age of those employed in the automotive industry was 42.1 years, an increase of 3.25 years from 2006. However, the industry is slightly younger, on average, than the broader New Zealand workforce (45 years in 2013, and 40.9 years in 2006). The ageing population is due to a number of factors, such as increased longevity, fewer births and lower net migration.

In 2015 the automotive industry employed 64,852 personnel. This is an increase of 3% from 2014.

The workforce size is projected to remain stable through to 2020.

All the above factors have implications for the sustainability of the automotive industry.

Ethnic Groups¹



58%

NZ Workforce

42.7% Automotive industry

43% NZ workforce

10

7. Planning Ahead

So why is it important for industry to plan ahead?

The automotive industry is largely shaped by small to medium sized enterprises (80%). The pace of technology is changing at a rapid pace and technology is increasingly influencing customer engagement and behaviour. Industry will need to consider how customer engagement strategies embrace technology solutions.

There is increasing investment from Government to improve our infrastructure, incorporating smart technology. Environmental considerations will play an increasing role in technology development and customer preferences.

The millennial generation are more technologically mobile and a pipeline that is more socially connected, environmentally conscious and will require potentially different ways of responding to their educational and training needs and career aspirations.

Industry will need to devise systems that are agile and responsive to those needs. The existing workforce will require ongoing upskilling opportunities to keep their skills current and relevant to industry. Industry must plan ahead to ensure it is well positioned to attract fresh talent from an increasingly well informed and diverse population.

To achieve this, industry will need to actively raise their levels of participation in industry training. MITO New Zealand with its national coverage can support industry to develop productive and profitable enterprises, and grow their workforce skills through skill standards and qualification achievement. MITO provides pathways that allow a smooth transition from school into vocationally based career pathways. The challenge for industry will be to continue to offer sufficient training opportunities to future proof both current and future needs. Many other industries are currently noting similar concerns when planning their workforce requirements.

The automotive industry will need to grow the levels of those

Business Size¹Micro-businesses
(5 or fewer employees):
82%82%4.4Image: the average number of employees

participating in formalised industry training from 7.5% currently to at least 10% (and for technician roles increasing current participation levels to 15%). This increase needs to occur to fill gaps created through the natural attrition as expected with an aging workforce and to attract an increased share of the younger generation. This will ensure the industry has a sufficient pool of talent to avoid current and future skill shortages. A higher skilled workforce will be more resilient and adaptable to change brought about by the increasing influence of new technologies.

PRIORITIES FOR THE AUTOMOTIVE INDUSTRY

GOAL 1 Recruiting Employees	 Strategy (Find) Promote qualifications, training programmes and continuous professional development as an enabler to increase skill levels and relevance Promote industry and career opportunities to school leavers, industry employees and others seeking work Strengthen pathways from secondary school into vocationally-based industry training to support the transition from school into the workplace.
GOAL 2 Retaining Employees	 Strategy (Retain) Co-ordinate efforts between MITO, industry associations and employers for human resource development, career pathways and succession planning Improve employers' people management practices and strategies to improve retention Develop qualification pathways that support career development and progression.
GOAL 3 Training and Development	 Strategy (Train) Work with current and prospective employers of apprentices to make sure training is effective and timely Increase employer participation in formalised industry training Provide flexible training systems that enable employees to adapt to keep up with technology advancements Develop employer management capability.
GOAL 4 Skills Utilisation	 Strategy (Utilise) Promote continuous professional development to meet changing technology requirements and ensure skills remain current, relevant and utilised Encourage investment in technology Research technology opportunities to support development of qualifications, programmes and training delivery arrangements.
GOAL 5 Productivity Gains	 Strategy (Inspire) Promote best practice leadership to support a high-performing and innovative workforce Improve productivity through best-practice sharing and collaboration Benchmark best practice to optimise the training return on investment (ROI).

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Level 10, 79 Boulcott Street PO Box 10803, The Terrace Wellington 6143

0800 88 21 21 info@mito.org.nz mito.org.nz