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To Job Queensland Future of Work Consultation Team

**Re: *Jobs Queensland Future of Work in Queensland to 2030 -Evolution or revolution*
Discussion paper**

1 Introduction

1.1 The Motor Trades Association Queensland (MTA Queensland or the Association) responds to *Jobs Queensland Future of Work in Queensland to 2030* discussion paper (the paper) by submitting the following views and issues for consideration.

1.2 The MTA Queensland's comments are submitted on behalf of its constituent divisions and are confined to issues which relate to the interests of Queensland's automotive value chain.

2. Overview

2.1 The National and the State's economies are critically reliant on effective commercial and private road transport logistics and the farm and industrial machinery and equipment sectors which form a major determinant of the state's economic performance and their intranational and international competitiveness. The automotive value chain performs the essential role of supplying and maintaining both the commercial and private vehicle fleets, industrial machinery and equipment inventories for agriculture, mining and infrastructure sectors.

2.2 Over the next decade and beyond, the national and state automotive value chains will experience arguably the most severe technical disruptions of any sector in Australia's economy with the widespread uptake of battery electric vehicles (BEVs) and especially the broad introduction of plug-in-electric vehicles (PIEs). Superimposed on this is a technical revolution initiated by the implementation of multiple levels of autonomous operating vehicles and machines across all sectors of the economy.

2.3 Queensland's road transport, industrial machinery and equipment sectors in the medium term however, will be a dichotomy. The decentralised nature of our economic geography and the progressive delivery of infrastructure for BEVs and PIEs means that internal combustion engine vehicles (ICE) will only be displaced gradually. This means the State will need to contiguously support the introduction of BEV and PIE technology whilst retaining a strong capability to service the remaining ICE fleet, industrial machinery and equipment.

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2.4 Critical to these circumstances will be the state's investment in human capital to meet the demand from both the new technologies in the automotive sector and the demands for skills that will continue to be generated from the remaining conventionally powered road transportation, and private motoring and industrial machinery inventories.

2.5 As indicated in previous submissions on the issue of 'jobs', the MTA Queensland has been extensively modelling future and human resource demand for this sector. The view has been formed that there needs to be major investments, reforms and restructures to the formation and delivery of human capital for the automotive value chain if the state's economic performance, competitiveness and standards of living are to be maintained at their present levels.

2.6 The Association has been aware of the challenges and technological dynamics that the sector is going to face and has been a long-term advocate for enhanced education and training to meet future demands. For this reason, the Association has collaborated with stakeholders including academia to progress understanding of the emerging technologies and digital disruption so the membership and automotive value chain can access the intellectual capital needed to meet the future demands of the sector; have the capability to adjust business models; and generate new and more effective business modus operandi.

2.7 This collaboration formed the basis for three *Carmageddon* symposiums to provide sectoral leadership with an advanced understanding of present and future disrupters to the value chain, to bridge the knowledge gap on the digital economy and the emerging technologies in this sector and highlight the need for a skilled workforce to service industry demands. The extent and velocity of technological changes for enterprises engaged in the motor trades value chain will be challenging and are likely to demand the adoption of a new skills regimen and knowledge base to accommodate the paradigm changes which disruption and autonomous vehicle technology will initiate.

2.8 On a practical basis, the Association established an automotive innovation hub – the first in Australia specifically directed towards advanced automotive technologies - at the MTA Queensland's Sir Jack Brabham Automotive Centre of Excellence. The objective of the hub, is to equip members so they are prepared for the consequences of digital disruption, better able to manage the impact of emerging technologies and to equip start-ups to pursue innovations relevant to the automotive sector.

2.9 Across the twentieth and twenty-first centuries the automotive value chain has adapted to and evolved with changing technology and new innovations to provide the market with the skills and consumers with the products and the services demanded by a first world nation highly reliant on land transport logistics and industrial machinery. The Association's skill's driver is the MTA Institute (MTAI) established in 1975 as the training entity to provide the sector with the human capital required for current and future technologies. In 1997 with the deregulation of the vocational training market, the MTAI became a registered training organisation entering into vocational training of automotive traineeships and apprentices. Over the past 44 years the MTA Institute has grown to be the premier provider of automotive vocational training in Queensland delivering leading edge courses to students and providing the automotive value chain with a skilled workforce to service the state's automotive private and commercial transport fleets and industrial machinery sectors.

2.10 To assist the automotive value chain with the necessary skill sets and to up-skill the workforce, the MTA Institute provides accredited apprenticeships and traineeships for each of the value chain's prime sectors. In addition, there are accredited short courses, gap training and other non-accredited industry courses to meet the demands of the consumer/client and the technological and workplace changes.

2.11 Set out below are views intended to enable this state to accommodate the forecast demand for future human capital and the disruptions the automotive sector will experience.

3 Training and Skills

3.1 The priority training and skills policy issue to be addressed is education and the regimen and syllabus that provides the foundation for students to enter a trade servicing automotive career. The paper (p.27) states:

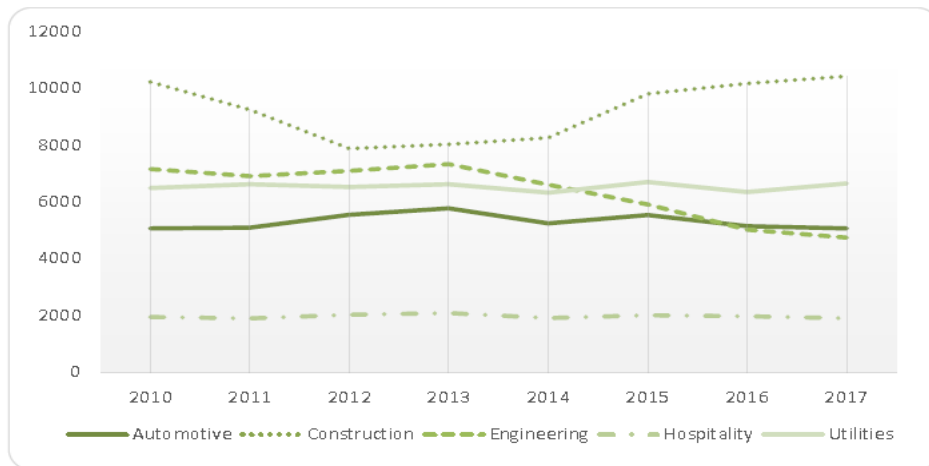
Education – be that school, VET or higher education – will be one of the most critical factors shaping workforce outcomes in the future. The research not only suggests that most of the new jobs of the future will require higher levels of skills but also that continual investment in education will be required in order to keep up with the rate of change brought about by developments in digital technology

The Association is in agreement with this prognosis.

3.2 The Association’s current assessment and underpinned by historical empirical data is that skills shortages have been a chronic constraint on the motor trades for more than a decade (Directions in Australia’s Automotive Industry – and industry report 2017). This report, although dated, indicated that in 2016-17 the priority Queensland skill sector shortage was estimated in the vicinity of 6,200 workers across the industry.

3.3 The Queensland Training Ombudsman’s Review of group training in Queensland (January 2018) provided snapshots of apprentices in training and the apprenticeship market share. These indicate a static and declining proportion of persons entering the automotive trades structure.

Graph 3 - Industry Trend – apprentices in training



Data provided by DET – as at 30/6/17

Graph 4 - GTO Apprenticeship Market Share – top 5 Industries in 2010



Data provided by DET – as at 30/6/17

3.4 Our view based on our Jobs Board and anecdotal information, is that skill shortages have deepened particularly with the technological and automation transformations across all automotive sectors. This view is supported by Department of Jobs and Small Business research that predicts across Australia, the motor fleet industry ‘in the five years to 2022, job roles will become available for 42,000 motor vehicle and parts salespeople, 27,000 motor mechanics, 10,000 vehicle parts and accessories fitters, 9000 panel beaters, 8000 vehicle painters, 2000 vehicle body builders and trimmers and 2000 automotive electricians’ (Burgess, M: Pop the Bonnet, Courier Mail, 3 November 2018).

3.5 In previous submissions, the Association have robustly contended that a necessary condition precedent to the ‘apprenticeship and traineeship system in Queensland is the prerequisite knowledge base to enter and progress within the career system. The foundation skills of literacy, numeracy and digital proficiency are essential building blocks to either enter or complete a trade apprenticeship and to become a successful trades’ person.’ The provision of these foundational skills must be recognised as the critical agents to drive the outcome of the ‘future of work in Queensland’.

3.6 The Association reiterates its previously stated policy position that to achieve the foundational skills necessary for a sustainable automotive sector: ‘The most appropriate way to address priority skills over the long-term, would be to develop a defined pathway for secondary school students to be inducted directly into the apprenticeship and traineeship system. The MTA Queensland submits that the following issues be considered as the baseline in formulating ‘future of work in Queensland’:

- addressing the pre-requisite academic requirements e.g. the foundation skills of literacy, numeracy and digital proficiency for a secondary school student to enter or complete a trade apprenticeship;
- resourcing the apprenticeship and traineeship system with the learning environments and the instructors with the skill sets to equip students for the new industry dynamics which includes the emerging technologies, diagnostics, digital literacy, innovation, and automation; and
- the recognition of the ‘automotive value chain’ as a ‘key industry area, and a partner with the government in this endeavour’.

3.7 The Association repeats from a previous submission: ‘Australia needs exceptional technical, trade and service workers whose skills are developed through effective occupational preparation

(Professor of Adult and Vocational Education Griffith University Stephen Billett, *The Conversation: We need to change negative views of the jobs VET serves to make it a good post-school option*, October 4 2018).

3.8 The MTA Queensland has formed a view that to achieve this outcome there needs to be a paradigm shift towards secondary school students acquiring the pre-requisite knowledge of the academic standards and requirements (science, technology, english and mathematics (STEM)) to enter the trades that would equate to those required to matriculate for an undergraduate tertiary qualification. Unlike a university degree, ranking is not relevant for students to enter a technical course or apprenticeship. Schools do not effectively promote the skills requirements or the academic qualifications required for students to enter the trades. Professor Billett stated:

schools should better inform young people about VET as a post-school option and include entrance into VET as an important performance indicator.

3.9 Entry points into the automotive industry from school lacks transparency. The general view is there is a need for these to be promoted and highlighted. VET in schools is one of these entry points and industry has reported there is a predisposition that highly credentialled applicants are not entering the industry through this trade pathway due to a lack of definition about the prerequisites for applicants to access vocational training.

3.10 The MTA Queensland submits that a defined academic pathway incorporating gradings and authority subjects (STEM) enabling secondary students to enter apprenticeships with greater confidence, enhanced capability to complete courses and successfully qualify as tradespersons in their selected automotive fields. It is the Association's view that this pathway is fundamental to the 'future of work' in the automotive value chain.

4 Technology Impacts

4.1 Technological transformations and associated disruptions will demand new skills and the underpinning training to service industry and consumers. PIE and automated vehicles/machinery will demand a cohort of workers with skills in machinery operations, digital literacy, big data, diagnostics, automation, innovation and artificial intelligence to service, maintain, or repair PIE and automated vehicles and industrial machinery and equipment.

4.2 Over the short to medium terms, the demand for PIE vehicles by consumers, corporations and industry is predicted to accelerate. It is estimated that by 2025 there will be 230,000 (approx. 46,000 in Queensland) electric vehicles on the nation's roads and this is expected to exceed one million (approx. 200,000 in Queensland) by 2030. In the industrial and equipment machinery sector, driverless trucks, conductorless trains, cell phone networks will progress and in agriculture digitisation and autonomous technologies will demand new skills and learnings in the lead up to 2030. We note that in an IDTechEX summary report, there are predictions of continued growth for industrial and commercial vehicles powering 'past 65% of the market - more than double that of cars' (Harrop, P Dr, *Electric Vehicles change the world 2017-2027*, Summary Report, IDTechEx <http://www.idtechex.com>).

4.3 Simultaneously, the automotive labour market will need to maintain cohorts of skilled workers to service, maintain or repair the current extensive range of ICE vehicles. The average age of Australia's vehicle fleet exceeds 10 years, farm and industrial machinery and equipment is estimated to be older than the vehicle fleet.

4.4 The MTAI has recognised the impact of technology on industry, the need for the skill sets to service the sector and the contiguous decline in the automotive apprenticeship and trainee cohort. To engage with the student cohort, Auto Camp was instituted in 2018. It is a 3-day non-accredited course offered every school holiday and designed for male and female high school students (14-17 years) to gain experience in a range of skills connected to the automotive industry. It is suited for students with an interest in electronics, engineering, design or manufacturing. The course content includes automotive principles and maintenance; electrical and electronic fundamentals; hybrid battery electric technology; design and manufacturing; and collision repair technology. Auto Camp has proved to be exceedingly popular resulting in available places being taken early.

4.5 Additionally, the MTAI offers Certificate II in Automotive Vocational Preparation, a five weeks course designed to give students a comprehensive set of skills as a basic introduction to the automotive industry. To supply the automotive industry with a skilled workforce and provide occupational opportunities across the sector, the MTAI offers wide ranging courses extending to MIG Welding fundamentals; Hybrid electric vehicle technologies; Air conditioning servicing; and Common Rail Diesel Injection basics.

4.6 The MTA Queensland through the MTAI has prepared for the impact of technological disruption by installing workshop capabilities and technical equipment relevant to the full range of automotive skills. This can be evidenced by Queensland based ACE Electric Vehicles assembling its ACE Cargo – a compact van with payloads of around 500kg – at the MTAI workshop. It is the first of a range of commercial electric vehicles to be trialled in Australia.

5 Legal institution and policy influences

5.1 The architecture of employment and skills policy will be critical for the future of work and the workforce. Collaboration amongst stakeholders is essential to ensure holistic and optimum viewpoints and experience influences are heard by Government agencies and the Government itself so that training syllabuses meet the demands of industry, students and people aspiring to a motor trade's occupation and consumers.

5.2 The MTA Queensland submits that to enhance policy direction, maximise outcomes and ensure good governance is applied to the administration of the VET system and Group Training Organisations a centralised independent co-ordinating entity should be established. This would ideally include representatives from the automotive, construction, engineering, hospitality, health and utilities with an appointed board to advise on strategic training issues and the current and future skill status and societal needs across these sectors.

5.3 The establishment of such an entity would increase industry input into the VET apprenticeship and traineeship system. From the perspective of the automotive industry, currently engagement on apprenticeship and traineeship issues is limited to infrequent discussions with Jobs Queensland and at VET Industry Advisory Organisations meetings.

6 Demographic and social changes

6.1 Australia's demographics are characterised by a decentralised population distribution. Regional and remote communities comprise approximately a third of Australia's population and are dependent on road transport logistics both private and commercial for their quality of life and standard of living.

6.2 Automotive service and mechanical repair businesses in many remote and rural locations face the challenge of operating in a disbursed or extended market catchment with diseconomies of scale.

It is essential that there is an equitable distribution of training and learning opportunities in regional, rural and remote Queensland and that technological and digital advancements are not impeded by a lack of trained personnel to service the automotive industries. The high propensity to rely on 'fly-in-fly out' or 'drive-in-drive-out' for servicing road transport logistics and the industrial machinery and equipment sectors is both inefficient and places an unwarranted drag on the state's economy.

6.3 In a social aspect, the 'future of work' digital and technological have the potential to make a significant contribution to resolving the challenges facing Queensland communities and conurbations including: changes in state and community economic spatiality such as where people live and where they desire to live, sub-optimal population distribution, urban sprawl and logistics; congestion; the future economic geography of the state as it transitions from a mining to a more broadly based economy; and the location of social infrastructure and community amenities.

6.4 Social changes and habits will be influenced by trends for new technologies. The likelihood is that there will be differences in the immediacy of social acceptance levels such as autonomous vehicles dependent on changed transgenerational changes and education differentials. Over the long term there will be substantial levels of social acceptance, as evidenced by recent research which suggests that the 55+ cohorts have embraced technology changes for economic, social and physiological purposes.

7 Background

7.1 The MTA Queensland is the peak organisation in the State representing the specific interests of businesses in the retail, repair and service sector of Queensland's automotive industry located in the State. There are some 15,500 automotive value chain businesses employing approximately 88,500 persons generating in excess of \$20 billion annually. It is an industrial association of employers incorporated pursuant to the *Fair Work Act* 2009. The Association represents and promotes issues of relevance to the automotive industries to all levels of Government and within Queensland's economic structure.

7.2 Australia's first automotive hub, the MTA/Q, has been established in specially prepared space at the corporate office. The hub is an eco-system that supports innovation for the automotive industry.

7.3 The Association is the leading automotive training provider in Queensland offering nationally recognised training, covering technical, retail and the aftermarket phases of the motor trades industry through the MTA Institute - a registered training organisation. It is the largest automotive apprentice trainer in Queensland employing trainers geographically dispersed from Cairns to the Gold Coast and Toowoomba and Emerald. The MTA Institute last financial year accredited courses to in excess of 1,600 apprentices and trainees.

Thank you for your deliberation.

Yours sincerely



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