VACC Submission

Victoria's Future Industries Transport Technologies

Discussion Paper

Victorian Government Department of Economic Development, Jobs, Transport and Resources

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Submitted by the Victorian Automobile Chamber of Commerce

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Introduction

VACC represents more than 5000 small and medium-sized businesses in Victoria and has, for nearly 100 years, been a strong and consistent voice for the retail motor industry in Victoria and more recently in Tasmania. Among its industry roles, VACC is charged with a responsibility for communicating with government when policy and planning matters affect operations in the industry and in particular VACC member businesses.

Issues relating to the development and production of motor vehicles, parts and accessories are of particular interest to VACC, given the relationship between these sectors and the broader automotive retail service and repair sectors. VACC members have, since the arrival of the motor vehicles in Australia, been intimately connected with businesses that manufacture, remanufacture and sell componentry into the industry. These members, along with the broader automotive community and government, recognise the need to support transition for businesses and individuals as the industry undergoes significant structural change.

In making this submission, VACC acknowledges the commitment of the Victorian Government to the wellbeing and development of the state and its businesses, and in particular those businesses and industries undergoing transformative change.

Critical issues

VACC centres its discussion on seven critical issues (questions) identified from the 18 questions the Department of Economic Development, Jobs, Transport and Resources raise for consideration by industry and listed in their in discussion paper.

A University of Adelaide report *(Barbaro, Spoehr and NIEIR, 2014)* on the closure of Australia's largest vehicle manufacturers states that 198,826 jobs are at risk nationally after calculating the potential impact in each state. It estimates that up to 98,483 people in Victoria will lose their jobs.

It is VACC's view that with industry-to-industry collaboration and support from the Government, employees can be migrated from automotive manufacturing/parts manufacturing to the following industry sectors:

- Trucks and trailers
- Buses
- Rail vehicles (trains and trams)
- Recreational vehicles including caravans and boats
- Specialty vehicles
- Aerospace components.

2. What is the transport equipment sector's unique selling proposition in international markets?

The Melbourne tram network is the largest operating tram network in the world[1]. Innovations that deliver improvements in Melbourne are likely to have applicability in other light rail networks. Melbourne and its vehicle and vehicle components sectors have an international reputation for the design, development and manufacture of high-quality automotive vehicles and componentry.

Although the closure of Australia's passenger vehicle manufacturing plants is imminent, the skills and knowledge developed over many years can significantly assist the transport equipment sector and the Victorian economy more broadly. This combination of high-level skills capability coupled with a desire for vehicle and equipment manufacturers to provide services to domestic and offshore enterprises can be the genesis of new businesses growth in Victoria, which will in turn support the transition of personnel between enterprises and industry sectors.

5. What assistance would you need to take advantage of global trends and what role should the Victorian Government play?

Global trend – Materials science and engineering

Government through research and development funds should encourage the use of lightweight materials such as aluminium and composites in the construction of trams, trains, truck trailers and rail rolling stock. These materials are in common use in the auto components sector and it is anticipated that use will grow exponentially in the coming years. As vehicle and componentry designs seek to maximise the benefits of weight saving and increased torsional and structural strength, new materials will become more commonplace in vehicles and vehicle componentry.

The Government, as the customer, can specify a weight saving target for rolling stock at no detriment to strength or durability. The aim is to encourage the design, development and application of new materials in Australian-built vehicles and componentry. This could also lead to articulated light weight trams improving travel times and reducing road congestion.

Global trend – Technical improvements in battery performance

Support the development of a Centre of Excellence for electric vehicles, focused on making electric vehicles the dominant technology running the Australian vehicle fleet, e.g. fast electric charging stations, battery manufacturing plants, smart infrastructure to manage the grid, electric vehicle service training, tuning/software development for vehicle management systems, problem diagnosis and repair, emergency services issues, battery recycling best practice.

8. How can Victoria's transport manufacturers incorporate innovative manufacturing technologies into their businesses?

VACC supports destination industries adopting the Victorian Government's targeted suite of measures that focus on achieving demonstrable gains in productivity, building collaborative relationships, generating innovation, and ensuring the transport equipment sector has the skills it needs to compete in a the global market.

VACC argues that local businesses that demonstrate they have hired and are developing displaced automotive manufacturing workers should have more opportunities to compete for government contracts. VACC believes this will further strengthen the Government's Victorian Industry Participation Program. VACC understands and is supportive of this strategy, which sets five priority areas to lift the productivity and competitiveness of Victoria's manufacturing sector (i.e. transport equipment sector):

1. A world-class specialist manufacturing service

Manufacturing Solutions Victoria (MSV) should be supported and funded to lead manufacturers in identifying practical solutions to drive productivity and deliver greater flexibility to respond to individual business needs.

2. Productivity and innovation networks

The manufacturing element of the transport equipment sector should be supported to strengthen existing cooperation between businesses and with research institutions to facilitate supply chain integration and partnerships that promote innovation and technology diffusion. This support should be driven by dedicated, government-funded industry liaison specialists. These specialists would work across and between enterprises to share innovation experiences and to build collaborative industry networks.

3. Investing in technology

The manufacturing element of the transport equipment sector should be supported to introduce leading-edge technology to drive high growth potential. The acquisition and trialling of new technologies should be supported through industry/government co-investment, based on the capacity to build equipment and related products for the domestic and international market.

4. Support for small manufacturers

The manufacturing element of the transport equipment sector should be able to access specialised workshops to ensure small manufacturers can stay up-to-speed on latest trends in areas such as lean manufacturing, access to information on government tenders, and commercialisation. This role will require the coordination and management of specialised training, information sessions, and the development of industry forums where innovations and manufacturing collaborations can be encouraged. This action will require at least two funded positions to operate across the state.

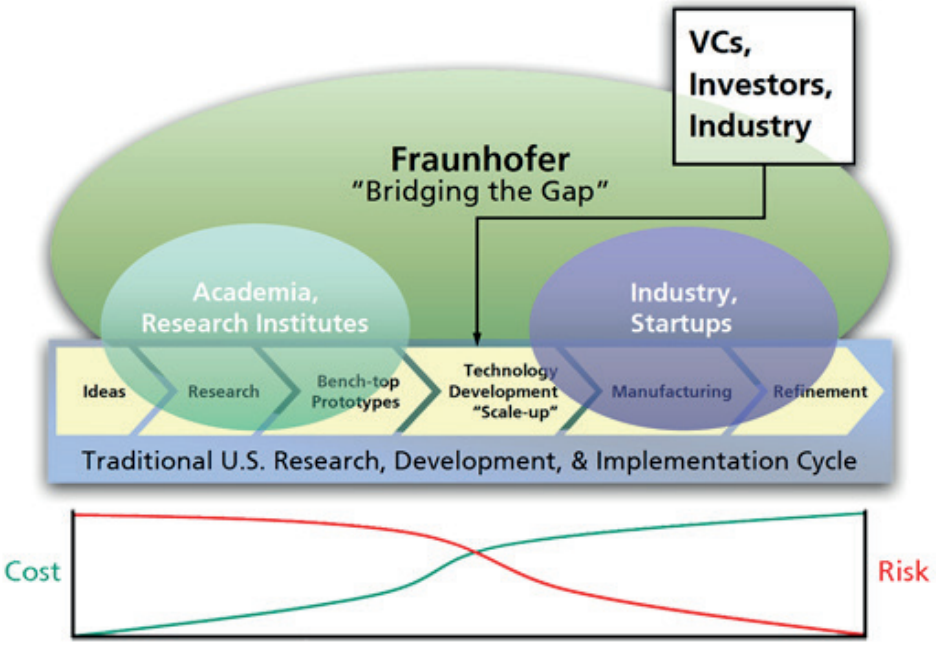
5. Niche and specialist skills

The manufacturing element of the transport equipment sector should be supported with a systematic approach to identifying and addressing priority specialist skill needs from the automotive manufacturing competency list (included in this submission). Skills mapping and skills gap acquisition should be applied to increase capability and capacity across the transport equipment sector. Although this role has been facilitated by various service providers, there is some fragmentation in approach and it is possible workers will fall through the gaps between programs. VACC suggests that two full-time coordinating positions are required to properly fulfil these roles and to support the transition of skilled workers into the equipment manufacturing sector.

VACC also encourages research institutions to commit a minimum percentage of their research budget towards projects that support the development of the equipment manufacturing sector. This should especially be the case where the Government has provided funding to institutions, given there is a capacity to direct funding towards state government priorities.

The Government should also pursue additional funding for VET and higher education training providers to encourage the take-up of automotive mechanical and related engineering studies. This will ensure the development of a pipeline of skilled workers to meet future industry needs. It is highly likely that studies in these areas will diminish as public perceptions about the industry change. It will be imperative that additional public financial support is provided to ensure continued training in automotive engineering programs while the industry undergoes significant transformation.

VACC recommends the Government sponsor the development of concepts coming out of research institutions to the point where they can be tested and developed by industry as per the German *Fraunhofer* model.



10. What mechanisms are required to enable the transfer of knowledge and skills from the carmakers to increase capability in the transport equipment sector?

11. How could Victoria capitalise on its existing infrastructure, facilities and highly skilled workforce to grow opportunities in transport equipment manufacturing?

VACC has elected to combine the critical issues above and address them together.

Retrenched employees face costs associated with job search and training; some will have lower paid or less secure jobs once re-employed. Loss of employment is particularly challenging for older people and those with poor English proficiency or lower skill levels.

Although retrenched manufacturing employees may take longer, on average, to find new jobs, it is estimated that within 12 months of plant closures these workers are likely to be re-employed on a full, part-time or casual basis.

Adjustment pressures are likely to be concentrated within particular regions, such as parts of Melbourne and Geelong. Some affected regions already have relatively high rates of unemployment and social disadvantage. The Geelong region is particularly vulnerable to the negative effects of the car plant closures given the closure of other manufacturing businesses over the past decade and its relative distance from Melbourne and other large employment hubs.

The Victorian Government should ensure that workers exiting the plants have adequate access to skills audits, employment profiling and other services designed to prepare workers to locate and win new roles. A high-level focus should be on the measurement of skills and their match to skills required in industries such as: trucks and trailers; buses; rail vehicles (trains and trams); recreational vehicles including caravans and boats; specialty vehicles; and aerospace components.

Budget allocations should be made for workplace-based skills transition programs managed collaboratively by industry-based partners and the Victorian Government. Programs can include, but not be limited to:

- On-the-job and, in part, off-the-job training.
- Employment services for all clients in geographical areas placed under pressure by automotive manufacturing retrenchments and high youth unemployment.
- The Government should consider ways to target assistance to retrenched employees who are likely to encounter the greatest difficulties finding a new job. Assessment of employees' skills should be based on transferrable competencies and practical skills to ascertain capability and the degree to which gap training should be offered to support placement into new roles in the transport equipment sector.
- Target industry support programs, which are cost effective, to facilitate workforce adjustment. VACC is aware of programs already in place to assist workers in the transition to similar or other industries. However, it is also the case that high-level case management and mentoring programs have had the best outcomes helping vehicle

manufacturing workers into other job roles. Experience gained in the closure of the Mitsubishi plant in South Australia and transition programs at Ford also support this position and provide strong indicators to guide the Government.

VACC's idea is that industry and government should work together using an adapted VETASSESS program to evaluate the skill levels of displaced automotive manufacturing employees, with a transition to new employment at destination enterprises.

VETASSESS is on the Victorian Government's RPL list of approved providers. The occupations/competencies listed below could be the basis of skill assessments and skills development programs at destination industries/enterprises.

VACC also encourages the Government to work with industry associations to support the formation of start-up businesses that are initiated and driven by small groups of workers leaving the plants. Consideration should be given to the broader skills base in the existing manufacturing plants. A group of skilled workers may have the capacity to develop a successful small business in the component manufacturing sector. These actions would need high-level coordination and could enable job roles and job functions to move from the vehicle manufacturing industry into the component industry.

13. In what areas can governments work together to harmonise national standards and resolve technical barriers to trade?

The Council of Australian Governments (COAG) could be the starting point to form a working group with VicRoads and equivalent regulators in other states to harmonise the rules around vehicle accessories, autonomous vehicle regulations and data protocols. This would ensure one national market for manufacturers of these products rather than eight state and territory-based markets.

15. Where are the specific skills and training gaps and how best can we build, attract and retain the right skills in the transport equipment sector?

Ninety-seven occupations/jobs/competencies for automotive manufacturing have been identified by VACC. Displaced automotive manufacturing workers should be assessed against this list with the destination transport equipment segments in mind. From this list assessment tools that are able to distinguish between entry level capability (i.e., novice) to competent levels need to be devised to ensure on-the job training is pitched accordingly and pathways to competenc are accelerated.

1. Operate load shifting equipment
2. Control stock
3. Apply for jobs and undertake job interviews
4. Maintain workplace relationships
5. Produce computer-aided drawings
6. Contribute to production goals

7. Work effectively in teams
8. Prepare new product designs
9. Influence and lead work groups in an automotive manufacturing workplace
10. Prepare and document quotations
11. Apply quality assurance techniques
12. Apply safe work practices in the automotive manufacturing environment
13. Monitor and maintain a safe automotive work environment
14. Develop documentation and procedures
15. Conduct post-production inspections and tests
16. Rectify faults in vehicle metal components
17. Diagnose and repair mechanical faults
18. Rectify assembly faults
19. Provide automotive manufacturing advice
20. Conduct vehicle performance tests
21. Produce drawings manually
22. Rework faulty production engines
23. Use and maintain tools and equipment
24. Prepare and operate tools, equipment and machinery
25. Monitor and maintain automotive equipment
26. Use and maintain measuring equipment
27. Calibrate measuring equipment
28. Test plant, tools, equipment, product and systems
29. Install vehicle plant, equipment and systems
30. Maintain vehicle plant, tools, equipment and systems
31. Repair vehicle plant, tools, equipment and systems
32. Manufacture and modify vehicle plant, tools, equipment and systems
33. Use technical data relating to plant, tools, equipment and systems
34. Repair structural faults in vehicles
35. Rectify minor faults in vehicle paintwork
36. Control vehicle paint line production
37. Repair vehicle electrical faults in assembled vehicles
38. Install and maintain motor vehicle instrumentation sensors and transmitters
39. Stamp and press vehicle parts
40. Test vehicle welds ultrasonically
41. Inspect welding
42. Receive and dispatch vehicle components
43. Prepare and process automotive materials and components
44. Reduce cycle time in automotive manufacturing work processes
45. Reduce waste in automotive manufacturing work processes
46. Plan and organise automotive production and assembly processes
47. Apply continuous improvement in automotive manufacturing
48. Sustain quality standards in an automotive manufacturing workplace
49. Document manufacturing design processes
50. Perform die coating
51. Set and adjust automotive production machine tools
52. Monitor and maintain operation of metal treatment plants
53. Analyse test vehicles for research purposes
54. Develop research reports on vehicle design, development and production
55. Evaluate vehicle design, development and production information

56. Conduct engine hot tests
57. Test automotive production components, equipment and systems
58. Undertake preliminary fault finding and machine reset
59. Create new product designs
60. Develop conceptual models and prototypes
61. Provide customer service
62. Apply heavy vehicle standards
63. Participate in workplace productivity improvement processes
64. Apply workplace technical quality standards
65. Read and interpret work orders and working drawings
66. Service vehicle after assembly
67. Assemble, install and test braking system kits
68. Perform wheel alignment operations
69. Install fixed and moveable glass components on vehicles
70. Assemble vehicle components
71. Assemble vehicle frames and axles
72. Install or replace mechanical units and assemblies
73. Install and fit out components
74. Read and interpret engineering drawings and determine requirements
75. Assemble, install and test hydraulic system kits
76. Assemble, install and test pneumatic system kits
77. Bond and repair fibreglass components
78. Replace and repair vehicle body panels and fittings
79. Finish and paint vehicle body and part surfaces
80. Rework vehicle paint faults
81. Install and replace vehicle electrical units and assemblies
82. Manufacture and modify vehicle wiring harnesses
83. Test, modify and repair vehicle electrical circuits and systems
84. Prepare materials for fabrication using jigs and fixtures
85. Prepare materials for fabrication using manual processes
86. Fabricate plugs
87. Fabricate parts for vehicle sub-assemblies
88. Apply trim to vehicle components
89. Perform basic welding, thermal cutting, heating and gouging
90. Perform mechanical cutting
91. Perform manual metal arc welding
92. Perform gas tungsten arc welding
93. Perform gas metal arc welding
94. Machine parts
95. Paint vehicle chassis and panels
96. Install vehicle components
97. Modify and repair chassis and frames.

At a broader level, general business and management skills should be further explored as a means of ensuring people who may wish to start a business have the proper capacity to do so. Given the age demographic of people in the vehicle manufacturing plants, it is possible that many older workers will be less attractive to other employers. This may leave large groups vulnerably to ageing in unemployment.

The attraction and retention of workers into the transport equipment sector can be assisted greatly through government subsidies to employers who take on automotive manufacturing workers. This retention funding should be staged over three years, with employers accessing percentages of the funding support: 50 per cent in the first year, 30 per cent in the second year and 20 per cent in the third year. Funding support could be based on a percentage of an employee's wage.

Reference

Barbaro B, Spoehr J & NIEIR. 2014. Closing the Motor Vehicle Industry: The Impact on Australia. Adelaide: Australian Workplace Innovation and Social Research Centre (WISeR) and the National Institute of Economic and Industry Research (NIEIR), The University of Adelaide.

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