



**Automotive Industry
Strategic Action Group
(AISAG)
Project
Report**

August 2005



The Automotive Industry Strategic Action Group (AISAG) Project

Support for the Automotive Manufacturing Industry
Through ACE and Related Initiatives

August 2005

AISAG and VCAMM gratefully acknowledge the support of the FAPM and the Victorian Government during the course of the study, including the provision of financial assistance. However, the views expressed in this report are those of AISAG and VCAMM, and should not be attributed to the FAPM nor the Victorian Government. The FAPM and the Victorian Government do not accept any liability with respect to the contents of the study report, or its use by any person.

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CHAIRMAN'S FOREWORD

17 August 2005

Hon Mr. Andre Haermeyer MP
Minister for Manufacturing & Export
GPO Box 4509RR
MELBOURNE VIC 3001

Dear Minister Haermeyer

The Automotive Industry Strategic Action Group (AISAG) was established in June 2004, and was jointly funded by the automotive industry through the Federation of Automotive Products Manufacturers (FAPM), and the Victorian State Government. The objective was to determine what activities might be sited at, or coordinated by the proposed Automotive Centre of Excellence (ACE) in the Docklands, to assist the industry, in particular the component sector, in meeting future global challenges. Recommendations and comments regarding the ACE proposal are attached under the cover of this letter. In addition specific strategic initiatives for the Auto Industry have been identified on the basis of the interviews with industry.

The AISAG group was made up of industry participants, past and present, and representatives from industry bodies, academia and government departments who have for the most part, given of their time voluntarily. Mr Brad Dunstan and Mr David Owen from VCAMM Ltd were contracted as consultants to carry out the project. I am grateful for the assistance given by these people.

Whilst some of the recommendations may be seen as going beyond the charter of AISAG, the need for some radical initiatives has become hard to ignore.

The importance of the automotive sector is well recognised. In Victoria it accounts for 27,000 jobs and nationally 55,000. It is a significant contributor to the national technology base.

It is understandable that many could be misled about the "health" of the industry with the constant focus on the "million vehicle market". The facts are that only 275,000 or 30% of the market are locally produced vehicles while around 673,000 vehicles are imported. In addition approximately 125,000 vehicles are exported, giving a total domestic vehicle production of 400,000 p.a. Total automotive exports, both vehicles and components, is valued at around \$5 billion.

If the number of domestically produced vehicles sold here continues to decline, and any of the export market volumes allocated by parent companies were redirected, there will be more casualties in the component sector, with resultant increased cost pressures on the vehicle manufacturers. While the "knock on effect" is difficult to forecast, we believe that a reduction in locally produced volumes to around 300,000, would only justify two or three vehicle manufacturers at most with a corresponding reduction in the components industry nationally. The lack of a healthy component sector would seriously jeopardise the viability of any local vehicle assembly operations.

We are encouraged by the level of interest in, and support for, the Australian automotive industry by Government. The Federal Government have indicated their support through ACIS and initiatives such as the AutoCRC. Similarly, the Victorian State Government and the South Australian State Government, while independent of one another, continue to fund research and innovation, and support the development of an industry plan and other initiatives.

However, the pressure of global competitiveness has set the “clock ticking” on the Australian automotive industry. AISAG believes that it is vital that an industry leadership group is identified, and actively supported by governments with the necessary authority and resources to promote and oversee the implementation of initiatives to assist the industry through a significant transformation period to ensure its global competitiveness.

It is essential that all levels of government benchmark their imposts on the industry, and their support to the industry, against global competition. From this activity an industry plan must be developed, supported and monitored by the industry leadership group.

AISAG recognises the independence and different approaches to the challenge of global competitiveness being taken by the vehicle manufacturers, in particular their effect on the component industry, where policies vary from a cooperative to confrontational. We accept that in the end, market forces will prevail but we also believe that industry and government must cooperate more than they have in recent times, to maximise the potential of the industry to survive, albeit in a very different form to what exists today.

We believe AISAG’s seven point action program, including recommendations on industry leadership, supplier development, education & training, positioning, innovation, promotion and communication, and policy is key to the future health of the industry.

AISAG believes that the development of the industry’s technological, innovation, and project management skills will underwrite the ability to maintain a position for Australia in the global automotive industry. This will require, amongst others, strategies to overcome high cost manufacturing, a new wave of technological and engineering skills to give us world class supply chain and manufacturing flexibility, and quick-to-market product designs. Management and technical education is paramount.

AISAG’s recommendations detailed in this report will assist with these developments. This, in turn, requires close cooperation between the Victorian and South Australian governments, the Federal Government and the above mentioned industry leadership group, to oversee the transformation that will occur.

Yours Sincerely,

Ivan Deveson AO
Chair – AISAG

AISAG Board Members:

Ivan Deveson AO – AISAG Chair

RMIT Business School of Management

Fran Thorn

Secretary, Department of Innovation, Industry and Regional Development

Patricia Nedan

Deputy Secretary, Office of Training and Tertiary Education

Brad Dunstan

CEO, Victorian Centre for Advanced Materials Manufacturing (VCAMM Ltd)

Bob Franklin

Managing Director

Autoliv Australia P/L

Bruce Griffiths

Managing Director

Air International

Ray Griffiths

Director/CEO

Kangan Batman Institute of TAFE

Jim Griffin

General Manager

Diver Consolidated Industries

Dr Chris Whitaker

Pro Vice-Chancellor

RMIT Business

Phillip Murphy

General Manager, Automotive Group

Kangan Batman Institute of TAFE

David Stobart

Chair – Manufacturing Industry Consultative Counsel (MICC)

Peter Thomas AM

Chair: Victorian Learning and Employment Skills Commission_(VLESC)

Peter Upton

CEO – Federation of Automotive Products Manufacturers (FAPM)

Ian Vaughan

Ex. Ford Vice President



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Australian Automotive Manufacturing Industry Significance

- ***Four Vehicle Manufacturers and around 200 component, tooling, and design and engineering firms***
- ***Economic Value***
 - ***6% of value added in manufacturing***
 - ***1% of Australia's GDP***
- ***Direct Employment: 55,000 people, (over 27,000 in Victoria)***
- ***Indirect Employment: 250,000 people***
- ***Key Exporter: \$5 billion***
- ***Significant flow on effects***

1. EXECUTIVE SUMMARY



1.1 Project Background

Preliminary

This document reports the findings of the Automotive Industry Strategic Action Group (AISAG) Project.

The Project, as detailed in the Agreement between the Hon Andre Haermeyer MP, in his capacity as Minister for Manufacturing and Export for and on behalf of the State of Victoria, and the Federation of Automotive Products Manufacturers (FAPM), dated 8th February 2005, encompassed:

- the establishment of AISAG and the achievement of specific Project activities.
- the engagement of a consultant by the FAPM to support the achievement of identified activities.

Context ¹

The Australian automotive industry plays a major role in the Australian Manufacturing scene, but is small in the global scene. Current global over capacity in vehicle production is larger than the local output by a factor of 10.

The local Industry is vulnerable to:

- Motor Vehicle Producer (MVP)'s Globalised Supply Chains.
- Weakening domestic supplier base.
- Increased product sophistication and technological change.
- Pressures to reduce costs/cycle times.
- A shortage of skilled people and a changing skills profile.
- Limited R&D and training funding.

There is a risk, that if we are unable to manage these threats, our industry will be seriously eroded. Alternatively, there are opportunities available to the industry in collaboration with Government and other stakeholders to ensure the future success of the niche-manufacturing base we currently enjoy. A number of proposals present opportunities to enhance our competitiveness in the global automotive manufacturing industry by utilising:

- The Automotive Centre of Excellence (ACE), to be constructed at Docklands where Stage1 automotive TAFE facilities were recently confirmed;
- The Cooperative Research Centre for Advanced Automotive Technologies (AutoCRC), recently awarded substantial Federal Government funding;
- The Advanced Centre for Automotive Research and Testing (ACART);
- The National ITS Centre of Excellence (NIC); and
- The Auto-Aero Design Centre of Excellence (AADCOE) proposal (developed by KPMG).

A key role for the AISAG is to provide recommendations to Government to maximise the benefits and support to the automotive industry arising from the ACE, AutoCRC, AADCOE and any other such projects or proposals. Concerns have been raised that the benefits from these projects could be fragmented and sub-optimal. AISAG was formed to address these concerns and provide 'the glue' to help ensure maximum critical mass is achieved.

¹ AISAG Project : SCHEDULE 1 - PROJECT BACKGROUND AND ACTIVITIES

1.2 Key Elements

Desktop Research

Desktop research (a literature review) was undertaken to explore publicly available information including reports, press articles, submissions to the Productivity Commission, and other relevant documents, to obtain an overview of the various issues facing the automotive industry and identify specific initiatives currently under consideration by the industry and other industry stakeholders. The specific focus was to identify initiatives or projects that might complement, integrate with, or link to the ACE (such as the AutoCRC and the AADCOE) and which could provide needed support for the automotive industry.

The Interview Program

In accordance with the Project Agreement, VCAMM made direct contact with the Victorian automotive manufacturing and related organisations that received an AISAG introduction letter from the Hon. Andre Haermeyer, Minister for Manufacturing and Export.

Discussion focused on addressing both Industry's current response to the proposal of having ACE (TAFE Plus) at Docklands, and also, as directed by the AISAG Board, to establish what other Industry initiatives could be included in a comprehensive action plan to assist industry in being both competitive and sustainable.

1.3 Results

The information resulting from the Desktop Review, Interviews and subsequent AISAG directed activity is detailed in two sections:

- PART ONE – AUTOMOTIVE CENTRE OF EXCELLENCE
- PART TWO – INDUSTRY INITIATIVES

The Automotive Centre of Excellence (ACE)

Interviews conducted indicate that Industry does support ACE as part of a comprehensive and collaborative response with Government.

Industry acknowledges that ACE could assist in the three key areas:

- *People Education and Training*
- *Product & Process Innovation*
- *Promotion and Communication*

There were varying levels of sophistication in opinions on ACE - most agreed ACE could provide a focus for the Industry.

However, in general, Industry sees ACE principally as complementary to the necessary strategic activity for the automotive industry to provide the information, knowledge and processes needed for future success.

While most expressed support for the potential strategic value, many believed their individual company's use of ACE would be small – none identified business critical needs that ACE would rectify as a facility - however they did believe the industry as a whole would benefit by an integrated approach to the education and training of people, and from having a facility focused on R&D and promotion outcomes.

Some indicated the group that will benefit from ACE the most, would be suppliers (SMEs) without sufficient financial resources, and that ACE would be of particular value in linking and resourcing those that are behind the wave in the current scramble for survival, both at a business and technology capability level.

Respondents also indicated that as individual companies, industry is not willing to provide funds for a capital works program. They would support ACE by accessing innovation and education/training programs and conference facilities on a fee for service basis.

The strongest support for the ACE came from Kangan Batman Institute of TAFE (KBIT). They could see the opportunity to leverage the TAFE Stage 1 and 2 facilities to create a technology precinct, and were confident that with a good Board of Management they could attract the right automotive focused tenants to complement their TAFE activity. They considered that a Stage 3 Commercial Building could be readily let as office space to tenants from within the Industry or potentially from elsewhere.

ACE – Recommended Elements

In terms of supporting Industry's response, the following elements should be included in ACE:

A. Education / Training

There is a need to complement the KBIT (Stage 1 & 2) activity with automotive specific higher education in engineering, manufacturing and management with the facilities to supply these services, providing a pathway from certificate to PhD in automotive related competencies. Provider(s) should be selected based on vision, speed, responsiveness, and commercial arrangements.

B. Innovation Support, by housing -

- AutoCRC (Auto R&D, \$130 million over 7 years incl. \$38.5 million in federal funds)
- Victorian Partnership for Advanced Computing (VPAC)
- Offices for R&D providers eg CSIRO (entry point)

C. Promotion & Communication

Provide a neutral place to meet and highlight Industry activity –

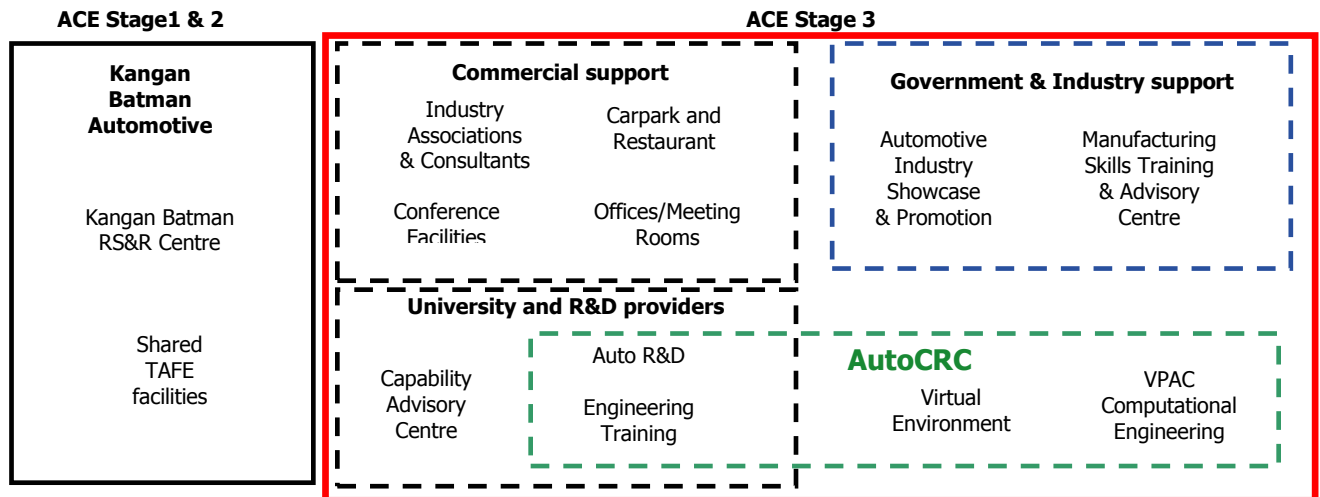
- Manufacturing Skills Training & Advisory Centre
- Automotive Industry Showcase
- Capability Advisory Centre

To support this it would desirable to add key automotive and related associations (VACC RS&R, FAPM, FCAI, TIFA, SAE Aust) providing offices and meeting rooms.

D. Commercial services

Conference rooms, the restaurant and car parking, identified in the ACE Stage 3 commercial building design (Lyon Architects) proposal, should be maintained.

Figure 1 - Recommended Elements for ACE



Recommended Stakeholder Actions

- *Go forward with the creation of an Automotive Centre of Excellence (ACE) to consolidate, direct and improve Australia's automotive focused infrastructure, to enable and support the industry in being competitive and sustainable in the global marketplace.*
- *The third stage of the ACE, known as TAFE Plus, should incorporate the following elements and supporting organisations:*
 - *People Education and Training – include higher education technical and management training provider(s).*
 - *Product & Process Innovation – include AutoCRC, VPAC & R&D providers eg CSIRO.*
 - *Promotion and Communication – include conference and meeting rooms, as well as space to house industry associations (FAPM, FCAI, VACC Tech Services etc).*
- *As a matter of urgency, a detailed and fully costed Proposal / Business Plan for the Third stage of the ACE should be prepared (over a three month time frame) to accelerate the planning needed for a commitment to Stage 3, so that it synchronises with the approval for Stage 2 of ACE.*
- *The proposal should be based on the existing design of the Stage 3 Commercial Building (Lyon Architects) to provide the extra floor space and facilities to house the identified tenants – final content and specific requirements to be negotiated with interested bodies.*
- *The Business Plan presented to the Minister should identify the cost of Stage 3 and investigate a number of funding options, identifying in each case the level of funding that the Victorian Government would need to provide.*
- *To progress the proposal an ACE Board of Management (BoM), reporting to the Minister for Manufacturing & Export, should be established with a Chairperson and full time CEO (and appropriate support staff).*
- *Initial financial support for the BoM should be sought from Industry stakeholders and the Victorian Government on an agreed basis, to allow the BoM to deliver the proposal.*

Industry Initiatives

AISAG project activity has identified the following key issues and initiatives in support of the Australian automotive industry:

1. Leadership - Priority

Leadership is key in this transition period – everything rises and falls on leadership. Traditional representation has been through the FCAI and FAPM with MVPs dealing directly, and independently with Government as required on a case by case basis. The majority of respondents believe there is a place for a national strategy and a single leadership group - collaboration & coordination is important! The answers for the Industry's future ultimately lie with senior Industry people and Government - these groups need to get together and identify what is needed to make a difference, plus the common ground, in order to move the Industry forward.

Recommended Stakeholder Actions

- *Stakeholders establish a single leadership group for the Australian Automotive Manufacturing Industry – this group may include MVPs, suppliers, the FCAI, the FAPM, the SA & VIC State Governments and the Federal Government.*
- *The Leadership Group identifies a new action agenda for the development of a strategic business plan for the Australian automotive manufacturing industry.*

2. Supplier Development - Priority

A healthy domestic manufacturing industry is needed to support the niche business strategy. There is an interdependence between the MVPs and suppliers - to keep MVPs here we need healthy competitive suppliers – and vice versa. Unfortunately, some MVPs (Supplier Quality Assurance) believe the implementation of the TS 16949 Quality Standard is sufficient to ensure supplier health. However it is important to understand all aspects of what it will take to build supplier capability for successful competition in the global marketplace. In terms of suppliers, many respondents consider Toyota as having the winning model - a focus on competitiveness (cost, quality, delivery) through lean manufacturing and process control, and, on adding value to support innovation capability. While each MVP may have their specific cultural overlay there will be common elements that will help develop "supplier capability".

Recommended Stakeholder Actions

- *Utilise the findings of the autoPOLIS Report² in the formulation of a plan for supplier development.*
- *Determine the value of 'independent' consulting support for suppliers on situational analysis and scenario planning, to help suppliers think and act strategically on current and future issues.*
- *Identify activity to increase supplier profile on the global stage - review the potential to use the Tooling Industry Forum of Australia (TIFA) consortia model, used by the Aerospace industry for collaboration, as well as other potential sources of support.*
- *Encourage supplier "self initiated rationalisation and / or partnerships" within the industry to maximise the efficiency of installed capacities and capabilities.*

² autoPOLIS report: **A Vision for the Australian Automotive Industry** – Prepared for the Federation of Automotive Product manufacturers – April 2005

3. People Education and Training

People skills & capability in 'state of the art' tools are required to support initiatives - we need to work with MVPs and visionaries to identify the skills that will give the industry a competitive advantage. Education and training must be customer focused, i.e. Industry driven. New opportunities include AutoCRC learning labs and a University interface at ACE.

Recommended Stakeholder Actions

- *Reinforce the interface between Industry and education/training providers through the ACE - appoint an education leader on the ACE Board of Management to drive initiatives.*
- *Define pathways/linkages for an integrated automotive education program, from Diploma to undergraduate Engineering degree, including B Eng (Auto) – identify programs for collaboration by education providers.*
- *Continue focus on providing education and training that meets industry's needs - review the opportunity for multi-institution education provider collaboration and for integrated programs at all levels.*
- *Undertake specific actions identified by the Working Group for VET, B Eng. (Auto), Masters courses, AutoCRC, an Automotive Cadetship, VPAC, the VACC and National & International Linkages.*

4. Positioning

There is recognition that many direct jobs are going – MVP global sourcing is reducing local content and manufacturing is going offshore. Australia can't compete with low cost sources such as China. To be competitive, many believe, Industry needs to be fast, agile & flexible. A possible niche business strategy is that Australia becomes the centre of innovation, design and engineering & project management for certain global products – holding intellectual property (IP), while manufacturing can be done anywhere.

Recommended Stakeholder Actions

- *Identify the competitive advantages and differentiators for the Australian automotive industry.*
- *Understand where the global Industry is going and the opportunity for Australia.*
- *Develop a corresponding strategy to enhance the performance of the local Industry to a level that recognises the impending change.*

5. Product & Process Innovation

The issues facing the Auto Industry are common to all manufacturing companies - There is a need to up-skill the Australian manufacturing industry with 'fast to market' solutions requiring less investment:

- Adding intellectual capability/value at all parts of the supply chain.
- Product design and engineering to allow a time to market of 12 – 24 months, not 5 years, by removing physical prototypes and using virtual certification.
- Flexible manufacturing...supply chain & logistics....
- Support business in the Innovation process, scenario planning and the ability to make changes.

Recommended Stakeholder Actions

- *Relocate the AutoCRC, VPAC and supporting organisations to ACE.*
- *Determine projects of common interest in process and business system innovation, to create a strategic advantage for industry.*
- *Identify existing R&D capabilities and gaps - identify the appropriate 'vehicles' for collaboration and collaborative R&D activity, including through the AutoCRC at ACE.*
- *Review the various sources of R&D funding and the basis of the allocation of funds towards strategic projects in order to maximise the potential strategic advantage.*

6. Promotion and Communication

There is a false view that the Industry is healthy based on sales of 1,000,000 vehicles (the majority of which are imported!). There is a belief that perhaps the Federal Government view is that everything necessary has been done for the Industry (Auto Action Agenda completed in 2000, Policy in place in 2002 and \$4.2 billion ACIS package to support reduced tariffs) and free market forces will drive improvement. While the responsibility is clearly in Industry's court, and market forces will prevail – the reality is that the Australian automotive industry's ability hasn't decreased – the competition has increased, and the game has changed. There is a need for industry and government to cooperate more than they have in recent times – for productive dialogue there is a need to define and promote the true situation by qualifying the reality of the "1 million sales" both inside and outside the Industry - metrics (data / statistics) are needed.

Recommended Stakeholder Actions

- *Define the true situation to allow dialogue with Government – requires real metrics.*
- *Undertake economic modelling for scenario planning on key issues- eg what is critical mass in terms of volumes and percentage (%) of local content to maintain Industry?*
- *Review AISAG report with FAPM, FCAI, DIIRD, State and Federal Governments.*
- *Develop a press release including output from AISAG activity - Identify Industry and Government press officers and key (sympathetic) journalists for coordinated rollout.*

7. Policy

The possible niche business strategy, with the outcome of radically reduced component manufacturing in Australia, puts at risk vehicle manufacture and assembly here - we need a healthy, realistic environment that promotes growth with Industry (MVPs and Suppliers) and Government working together. It is key that the Victorian Government and the SA Government work to put together a clearly thought out and robust plan (vision, strategy, and actions), however, they can't address this independently. In order to involve the Federal Government, such advocacy needs to be a very different plan than that in the past – the Industry needs to inform the Federal Government what it will do, and what it needs help with – its needs to synchronise with other policy settings – it needs to encompass the reality of the future. It is important to increase focus and activity around increasing exports if the vision for growth in exports by 2010 is to be realised.

Recommended Stakeholder Actions

- *Engage State Governments – together develop a clearly thought out and robust plan (vision, strategy, and actions) and seek Federal Government support for new initiatives.*
- *Identify how to support the Australian Auto Industry's competitive advantage – refer items identified by the Working Group – key is to increase the focus and effort on export.*
- *Integrate learnings from parallel activity in the Aerospace, Defence and Advanced Manufacturing Industries, including recent Action Agendas.*
- *Support industry stakeholder collaboration in development of an updated strategic plan for the Industry.*

1.4 Future Activity

AISAG believes with this report that it will have delivered its charter to –

- Review the opportunity for the Automotive Centre of Excellence (ACE).
- Identify additional initiatives to support industry.

The next phase is to get agreement and buy-in, by the key industry stakeholders and facilitators.

AISAG has started to focus the Industry on moving forward and have reinforced key issues and identified potential action agendas. AISAG have invested a significant amount of time and effort into the development of this report and want to ensure that the momentum generated continues. There is passion and energy for the well-being of the industry, the jobs at stake and the potential impact on the community. AISAG does not want the energy and passion to wane.

Although the submission of this report completes the AISAG Project, the AISAG members remain available to act as a reference group.

While ACE started as the focus for the Project, the importance of the issues and resulting industry initiatives has been elevated, and need to be addressed in a collaborative fashion - ACE will only realise its full potential if these additional issues are addressed!

The issues are important, and leadership is required to address them. While AISAG has completed its brief, it remains to be seen whether the current leadership groups are capable or motivated to work for a national industry strategy. AISAG may need to broker and provoke the activity further.

AISAG could facilitate the creation of an Automotive Industry Council (AIC) – contributing or acting as a catalyst.

The key is to discuss the issue of leadership with the responsible Industry Ministers.

There may well be a need to go and clarify with MVP HQ's in Detroit and Japan their position in establishing a long term plan for health of the Australian automotive industry.

Input is now needed on how this single leadership group should think and act to address the Industry's concerns.

A Vision for the Australian Automotive Industry -

- ***The global environment is becoming ever more challenging***
- ***Australia's position is not yet secure***
- ***MVP – ACP relationships are clouded by mutual suspicion***
The industry needs to go through another major transition if it is to survive
- ***The bottom line is that all parties must help the industry to move forward***

autoPOLIS report for the FAPM - April 2005³

³ *autoPOLIS report: A Vision for the Australian Automotive Industry – Prepared for the Federation of Automotive Product manufacturers – April 2005*

2. PROJECT INTRODUCTION AND BACKGROUND

2.1 Project Background

Preliminary

This document reports the findings of the Automotive Industry Strategic Action Group (AISAG) Project.

The Project, as detailed in the Agreement between, the Hon Andre Haermeyer MP in his capacity as Minister for Manufacturing and Export for and on behalf of the State of Victoria, and the Federation of Automotive Products Manufacturers (FAPM) dated 8th February 2005 encompasses:

- the establishment of AISAG and the achievement of specific Project activities.
- the engagement of a consultant by the FAPM to support the achievement of identified activities.

Context ⁴

The Australian automotive industry plays a major role in the Australian Manufacturing scene but is small in the global scene. Current global over capacity in vehicle production is larger than the local output by a factor of 10.

The local Industry is vulnerable to:

- Motor Vehicle Producers (MVP)'s Globalised Supply Chains.
- Weakening domestic supplier base.
- Increased product sophistication and technological change.
- Pressures to reduce costs/cycle times.
- A shortage of skilled people and a changing skills profile.
- Limited R&D and training funding.

There is a risk that if we are unable to manage these threats our industry will be seriously eroded. Alternatively there are opportunities available to the industry, in collaboration with Government and other stakeholders, to ensure the future success of the niche-manufacturing base we currently enjoy. A number of proposals present opportunities to enhance our competitiveness in the global automotive manufacturing industry by utilising:

- The Automotive Centre of Excellence (ACE), to be constructed at Docklands where Stage1 automotive TAFE facilities were recently confirmed;
- The Cooperative Research Centre for Advanced Automotive Technologies (AutoCRC), recently awarded substantial Federal Government funding;
- The Advanced Centre for Automotive Research and Testing (ACART);
- The National ITS Centre of Excellence (NIC); and
- The Auto-Aero Design Centre of Excellence (AADCOE) proposal (developed by KPMG).

Note, that at the Sod Turning ceremony for the first stage of ACE in December 2004, reference was made to the possible Stage 2 and 'TAFE Plus' facilities in Stage 3 of the ACE to support the automotive manufacturing sector.

A major challenge for all stakeholders in the automotive sector is therefore to identify the additional infrastructure, facilities and activities that could be located in the ACE to support the sector into the future. Additionally there is an opportunity to explore the potential to coordinate

⁴ AISAG Project : SCHEDULE 1 - PROJECT BACKGROUND AND ACTIVITIES

or integrate the ACE with the other projects above. These combined actions can achieve maximum focus for:

- Individual Component Companies through giving them access to better educated and trained people, providing better and lower cost technical support, and leveraging research and development opportunities;
- Education & Training and institutional Research & Development providers through allowing them to share costs, develop cooperative programs, generate critical mass, optimise costs, attract greater automotive company support for their services, and provide a more focused automotive experience to both students and teachers;
- The automotive industry as a whole through strengthening the education and training infrastructure, building a stronger R&D system, better showcasing the industry to the local community and the global industry and consequently better enabling the industry to attract high potential young people into the industry; and
- The community and Government through better linking the education & training system to industry needs and developing industry's overall capabilities, and hence contributing to the creation of high quality jobs and an increase in the attractiveness of Victoria as a location, and leader, in technology development for major industry events, investments, and exports.

Leadership needs to be shown in bringing stakeholders together to further these and other proposals, and an Automotive Industry Strategic Action Group (AISAG) was formed to provide this leadership. The component manufacturers and their association, the Federation of Automotive Products Manufacturers (FAPM), and other stakeholders support the AISAG concept.

A key role for the AISAG is to provide recommendations to Government to maximise the benefits and support to the automotive industry arising from the ACE, AutoCRC, AADCOE and any other such projects or proposals. Concerns have been raised that the benefits from these projects could be fragmented and sub-optimal, and AISAG was formed to address these concerns and provide 'the glue' to help ensure maximum critical mass is achieved.

2.2 Objectives

The objectives for the project were identified relative to two project stages.

Stage 1 activities

Make direct contact with at least 45 automotive manufacturing stakeholders to identify and record the additional education, training, research, development and other facilities and activities that they need, and the level of their buy-in and commitment to locating these facilities and activities at the ACE at Docklands. Stakeholders will include automotive manufacturers and research, development, education, training and other relevant organisations.

Review relevant reports on other projects and proposals that might complement, integrate with or link to the ACE (such as the Auto CRC and the AADCOE), and which could provide needed support for the automotive manufacturing industry.

Investigate the potential for the AutoCRC, the AADCOE and any other similar proposals and projects (including virtual facilities) to link with, integrate with or cooperate with the ACE. Additionally, investigate the benefits to industry of such actions and the level of industry buy-in and support.

Stage 2 Activities

Prepare a comprehensive action plan for Government including specific recommendations arising from the information collected during Stage 1.

2.3 Scope

Following consultations, the FAPM agreed to carry out the project for the AISAG and to engage a consultant to meet with industry stakeholders to identify the types of facilities and activities needed by Victorian automotive manufacturing companies, to establish the degree of industry 'buy-in' for these facilities and activities and to liaise with appropriate bodies to ensure that the ACE, AutoCRC, AADCOE and other such projects are coordinated appropriately.

Further, the FAPM agreed to have the consultant prepare a report to government recommending the types of facilities and activities that should be included in the ACE to support the industry and the actions needed to ensure that the ACE and other such projects are coordinated and integrated to the maximum possible extent.

To support the Project, VCAMM Ltd were engaged as consultants, and commenced work from January 2005.

A letter introducing the AISAG and the engagement of consultants was sent from the Hon. Andre Haermeyer, Minister for Manufacturing and Export to a cross-section of Victorian automotive manufacturing or related organizations.

Timetable

A timetable was developed in consultation with the FAPM and the AISAG Board, to guide the progress of activities as follows:

Confirmation of scope and approach	January 2005
Desk Research completed by:	March 2005
Formulation of interview list and template	March 2005
Report with results of Desktop Research to AISAG	April 2005
Conduct interviews	March – May 2005
Draft report to AISAG	June – July 2005
Presentation and discussion of draft report to AISAG	July 2005
Finalise report	August 2005

2.4 Key Elements

Desktop Research

Desktop research (a literature review) was undertaken to explore publicly available information including reports, press articles, submissions to the Productivity Commission, and other relevant documents, to obtain an overview of the various issues facing the automotive industry and identify specific initiatives currently under consideration by the industry and other industry stakeholders. Specific focus was to identify initiatives or projects that might complement, integrate with or link to the ACE (such as the AADCOE and the AutoCRC) and which could provide needed support for the automotive industry.

Key Documents identified were sourced from the following:

- Federal Government - Department of Industry, Tourism & Resources.
- Federal Government - Department of Education, Science and Training.
- Federal Government - Productivity Commission.
- Victorian Government - Department of Innovation, Industry and Regional Development (DIIRD), Office of Manufacturing and Service Industries.
- Federation of Automotive Products Manufacturers (FAPM).

The results of the desktop study with a summary of key documents and their recommendations has been summarised (14Apr05 Desktop Report #2 - 35 pages) and provided to DIIRD as background information for the Victorian Automotive Manufacturing Strategic Plan Mid-term Review, as part of the First Quarterly Report.

The information reviewed during this process confirmed the challenges the industry is facing and provided further background of the changes happening in the industry. It was noted that the majority of issues previously identified in these documents are still relevant and reflected in two of the most recent reports which can be used as reference material.

1. *FAPM / Ai Group report: **The Victorian Automotive Components Industry - COMPETITIVENESS, PROFITABILITY AND FUTURE STRATEGIES** - March 2005*
2. *autoPOLIS report: **A Vision for the Australian Automotive Industry** – Prepared for the Federation of Automotive Product manufacturers – April 2005*

As discussed later in this report and supported by interview results, the common, consistent and recurring themes noted include the following:

- *The significance of the industry and the need for action.*
- *A lack of an industry vision, strategic plan and leadership.*
- *A need to develop supplier capability.*
- *A need to identify Industry differentiators and pursue our competitive advantage.*
- *A need for product and process innovation.*
- *A need for access to skilled people through education and training.*
- *A need for a competitive environment through enabling policy.*
- *A need for Market Access to improve volumes/cost base through export.*

However it should also be noted that while there was recognition of the various issues and challenges, there was a lack of specific recommendations and initiatives.

The Interview Program

In accordance with the Project Agreement, VCAMM made direct contact with the Victorian automotive manufacturing or related organisations that received an AISAG introduction letter from the Hon. Andre Haermeyer, Minister for Manufacturing and Export. To ensure consistency and completeness, the interviews were carried out using a template developed by VCAMM and the answers recorded.

Key to the discussions were a specific presentation which included extracts from both the previous Allen Consulting report (*PWC, Allen Consulting, SMART Consulting & Research (Automotive Centre of Excellence: Globally Positioning Victoria - Facilities Development Financial Feasibility Project)*) with the proposed '3 stage model' and Lyon Architect's ACE presentation (AISAG Board 8th April 2005) showing the building concept and stages.

Discussion focused on addressing both Industry's current response to the proposal of having ACE (TAFE Plus) at Docklands and also, as directed by the AISAG Board, to establish what other Industry initiatives could be included into a comprehensive action plan to assist industry be both competitive and sustainable.

Specific Questions asked included;

- *What additional education, training, research, development and other facilities does your business need?*
- *What facilities do you need that could be incorporated in ACE, and what level of support would you have for these?*
- *What other initiatives are required for the Australian Automotive Industry?*

Reporting

VCAMM has collated the information gathered in the 'interview' and 'desktop research' stages conducted up until July 2005. Industry comments, key points and learnings have been provided to AISAG Executive Group Board Meetings, forming the basis of discussion and subsequent directives.

Documents provided to FAPM / DIIRD in the first and second quarterly reports include:

- Desktop Study – summary of key documents and their recommendations.
- A table (AISAG Interview Summary 1) accounting for each of the individual companies contacted and their responses.
- Edited transcripts of the interviews conducted with these companies have been provided on a 'commercial in confidence basis' for the FAPM and DIIRD review only.
- A summary document with comments, key points, learnings and information gained was provided in PowerPoint presentation file format to AISAG Executive Members, for an update and as background information for the Working Groups (AISAG Exec June05).

2.5 Results

The resulting information from the Desktop Review, Interviews and subsequent AISAG directed activity is detailed in two sections:

- PART ONE – AUTOMOTIVE CENTRE OF EXCELLENCE

Details the response from interviews with Industry in relation to the additional education, training, research, development and other facilities needed which could provide needed support for the manufacturing industry, the other projects and proposals that might complement integrate with or link to the ACE, and recommends the facilities and activities for the ACE at the Docklands.

- PART TWO – INDUSTRY INITIATIVES

Further information resulting from the interviews, the specific initiatives identified by AISAG, along with the initial output of AISAG Working Groups and recommendations that could form the basis for a strategic action plan in support of the Australian automotive manufacturing industry.

There are many challenges facing the Australian automotive industry in the current environment, including:

- ***The Australian automotive industry is relatively small by global standards, hampering the ability of its participants to achieve effective economies of scale, which allows them to compete in a global market place;***
- ***The rapid emergence of China and other low cost competitors is compounding global oversupply amongst the major producers, forcing the competitiveness of the local manufacturers to become a high priority;***
- ***The rapid appreciation of the Australian dollar has further eroded the competitiveness of Australian manufacturers when competing in local and international markets;***
- ***Changing tastes and preferences amongst consumers, specifically away from mid-sized family sedans in which Australian manufacturers specialise;***
- ***Potential difficulty in sustaining broader domestic demand at the levels achieved in recent years;***
- ***Further reduction in federal government assistance from 1 January 2005; and***
- ***Shifting purchasing patterns among major customers, often driven by the global demands of foreign parent companies.***

FAPM/Ai Group report: The Victorian Automotive Components Industry⁵

⁵ FAPM / Ai Group report: The Victorian Automotive Components Industry - COMPETITIVENESS, PROFITABILITY AND FUTURE STRATEGIES - March 2005

Part One - AUTOMOTIVE CENTRE OF EXCELLENCE



ACE – ORIGINAL PROPOSAL

The concept of the Automotive Centre of Excellence (ACE) has been discussed within the automotive industry since before 1998 and their active participation has been seen as central to the value of the specialist centre. The Department of Innovation, Industry and Regional Development has also been active in facilitating discussions within the industry and with representatives of industry associations.

In 2001 the Allen Consulting Group were engaged by the Interim ACE Board to assess the potential of all sectors of the industry to play a part in the Centre.⁶

The ACE Concept

The vision of ACE developed in the original feasibility study represents a response to the challenges facing the local automotive industry. It builds upon the recognition that there is considerable scope for cross-industry collaboration to strengthen its competitiveness and improve its domestic and international standing. It aims to bring together and better link to industry the wide range of capabilities that are present, supporting the development of the industry and contributing to its knowledge base.

In the rapidly changing operating environment of the global automotive industry, the quality of the available education & training and research & development infrastructure becomes critical to a company's ability to adapt to new demands and remain competitive. Similarly, the new environment also places greater importance on the industry's ability to attract and retain people with the capability to drive future innovation. The Automotive Centre of Excellence would be capable of addressing these areas. The ACE is seen as providing a way to cluster expertise and build an innovation ecosystem able to support the local automotive industry in particular, but also the wider manufacturing sector.

The Allen Consulting model of the centre and its component elements was developed through wide consultation with potential stakeholders, most of whom expressed strong in principle support for the concept.

The Role for an ACE

All industry stakeholders recognise that if the automotive industry, and indeed the manufacturing sector more generally, are to meet the global challenge and prosper in the future, a better and more integrated approach to both education & training and research & development is needed.

Currently support for the industry in these areas is highly fragmented, with the problem of a lack of critical mass being endemic amongst the wide number of individual service providing institutions. The distributed approach that has been followed in the past is not seen by industry as being adequate to support the industry's ability to successfully respond to the changing nature of the global automotive industry. It is not suggested that all existing services would or should be drawn into the Centre, but rather that activities where benefits from consolidation and collaboration are available, be conducted in the Centre.

Allen Consulting identified a range of needs that an ACE could be designed to address. These needs include those of industry, employees, TAFEs and Universities, and students and are located in the education & training, research & development, industry co-operation, education sector co-operation and industry promotion areas.

⁶ PWC, Allen Consulting, SMART Consulting & Research - Automotive Centre of Excellence: Globally Positioning Victoria - Facilities Development Financial Feasibility Project – August 2001

The consultation process undertaken during the Allen Consulting study brought to light significant support for, and indeed a real need for, the development of a broadly focussed ACE.

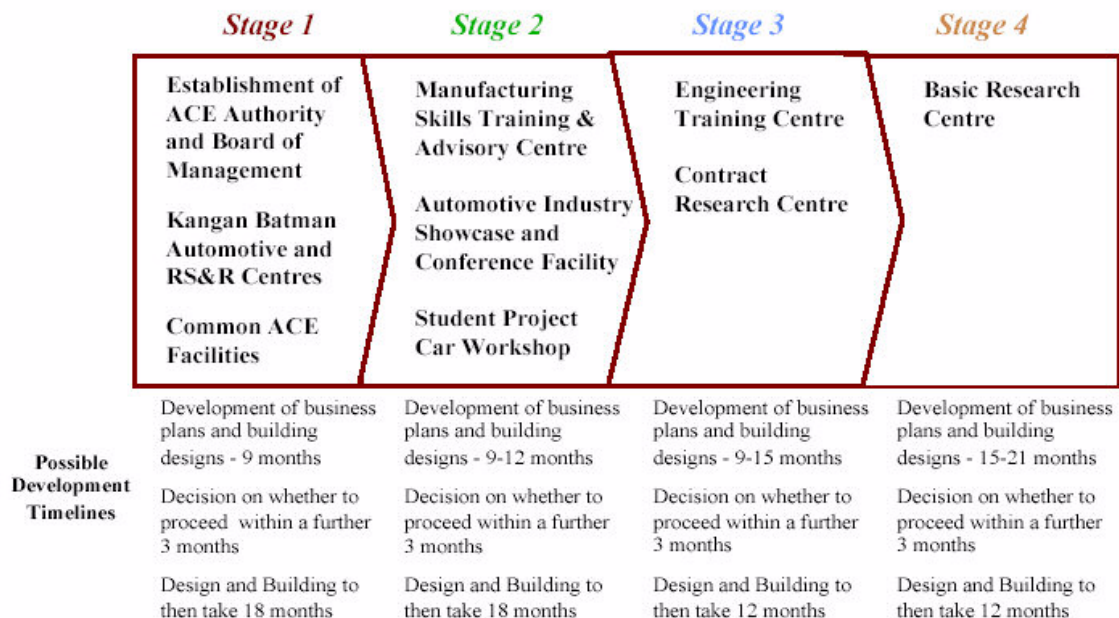
ACE could be primarily positioned to facilitate the better integration of activity currently occurring in relation to both education & training and research & development.

The value of an ACE would lie in the extent to which it can:

- strengthen the automotive industry's, and the wider manufacturing sector's, manufacturing and engineering capabilities to ensure they can compete globally;
- improve education & training and research & development outcomes through promoting critical mass and network effects;
- position Australia as a globally significant centre of excellence in the automotive industry, particularly in the areas of collaborative engineering services and niche manufacturing;
- showcase Australia's automotive expertise;
- position Australia as a supplier of high quality education and training (including distance delivery) services for the automotive industry;
- build the industry's image to allow it to attract the talented employees that it needs;
- broker best practice product design and manufacturing outcomes;
- improve linkages (both physical and virtual) between industry stakeholders; and
- allow high facility and equipment costs to be shared.

Figure 2 - Original ACE Elements and Staging

A STAGED DEVELOPMENT APPROACH



Source *The Allen Consulting Group*

Kangan Batman Institute of TAFE – ACE Building⁷

The state of Victoria is the hub of the Australian automotive industry, home to three of the four vehicle manufacturers, more than half of the industry's jobs, production, and exports.

Kangan Batman Institute of TAFE (KBIT) is Victoria's largest provider of automotive vocational training.

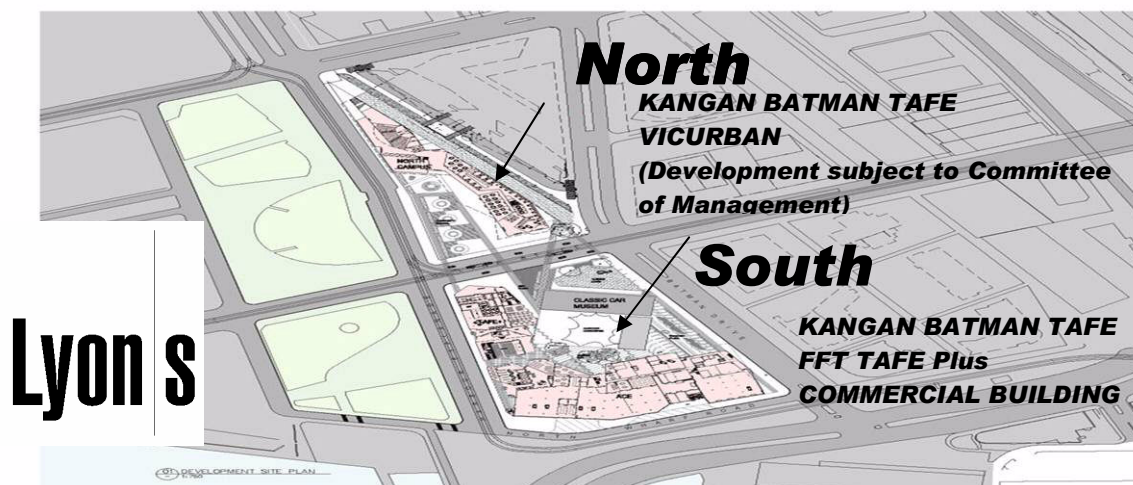
The Victorian state government, recognising the importance of the automotive industry to the state's economy, has provided funding for KBIT to build Stage 1 of an Automotive Centre of Excellence (ACE). Located in the Melbourne Docklands precinct, ACE will, when completed, be the first and largest of its kind in the southern hemisphere.

KBIT Vision for ACE

The Automotive Centre of Excellence is designed to support the progress of the automotive industry and to strengthen its capacity to compete successfully in the 21st century. The ACE concept has been developed in consultation with the automotive industry which has identified the need for:

- *increased innovation capabilities within the industry.*
- *a better, more integrated approach to education and training, and research and development.*
- *highly-skilled staff trained in the latest technology.*
- *centralisation of training to allow resource sharing and the ability to constantly update technology. In the retail, service and repair industry, there is an increasing sophistication and computer integration of diagnostic and maintenance tools. Likewise, in the component and vehicle manufacturing sectors, there is a need for ongoing staff training in the new design, engineering and production technologies. Currently, much of this training is conducted by individual companies.*
- *ongoing professional development for existing staff, in particular in leadership training for management staff, bringing together the TAFE, university and corporate education and training systems.*

Figure 3 – ACE precincts



⁷ <http://www.kangan.edu.au/ace>

Three Stage Implementation

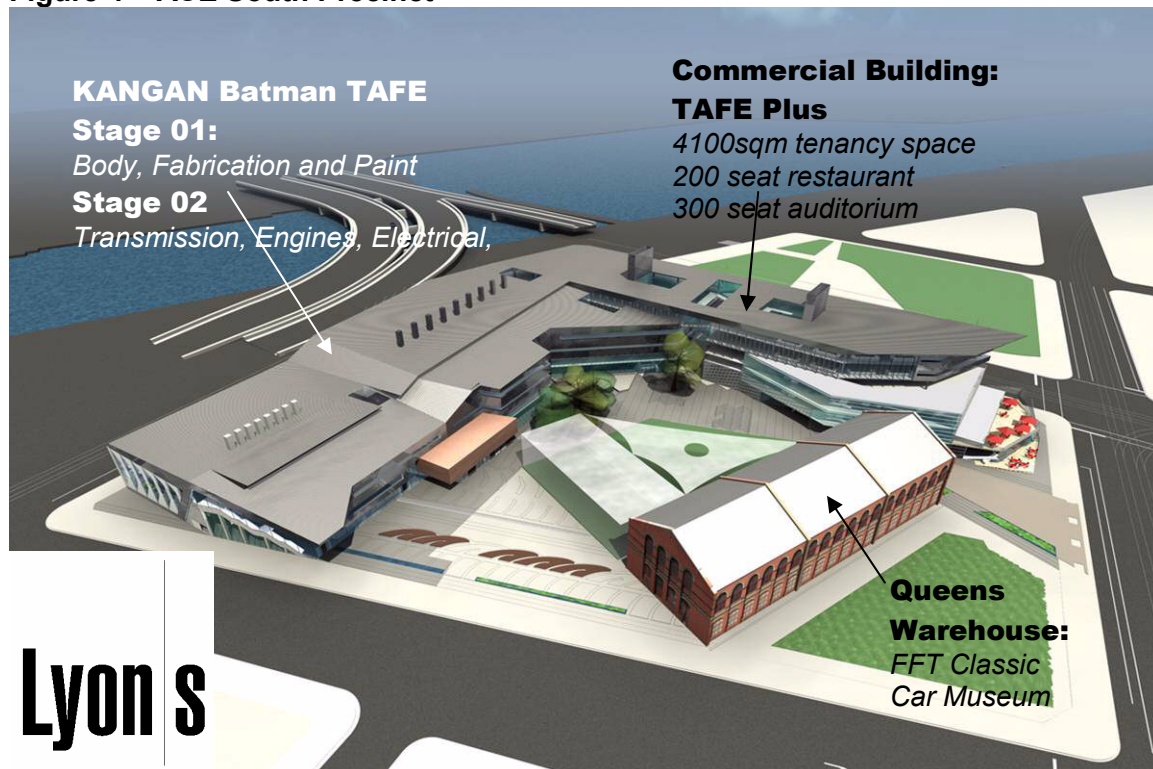
ACE Stage 1

Major planning of the ACE Stage 1 commenced in 2002 with project completion anticipated by mid 2006. The Centre will house the Automotive Body Trades training group - panel beating, vehicle body making, spray painting, automotive detailing, Certificate II pre-apprenticeship program and components of the automotive diploma program, plus staff and student amenities, café, customer service centre and a separate workshop for the Fox Group.

ACE Stage 2

Stage 2 involves the construction of a building extension of Stage 1, which would house the remainder of automotive trades training - motor mechanics, diesel mechanics and heavy vehicle mechanics, staff and student amenities, a library and a bookstore plus automotive research and development facilities. It may house some R&D facilities which would be shared with universities (RMIT and Deakin have confirmed their interest) and some private companies, who will have their own offices and the use of ACE workshops. Planning and construction funding for Stage 2 is currently being sought.

Figure 4 – ACE South Precinct



ACE Stage 3 – “TAFE Plus”(Commercial Building)

ACE Stage 3 involves the construction of the final major building on the south side of Collins Street. This Stage will contain conference facilities, an auditorium, commercial office space, a restaurant/café and a multi-deck car park. Uses suggested include public exhibition areas, an automotive industry showcase; an automotive management education centre; an automotive design centre; or an automotive industry centre which would house key industry associations and host conferences and seminars.

Figure 5 – ACE Stage 3 Plan

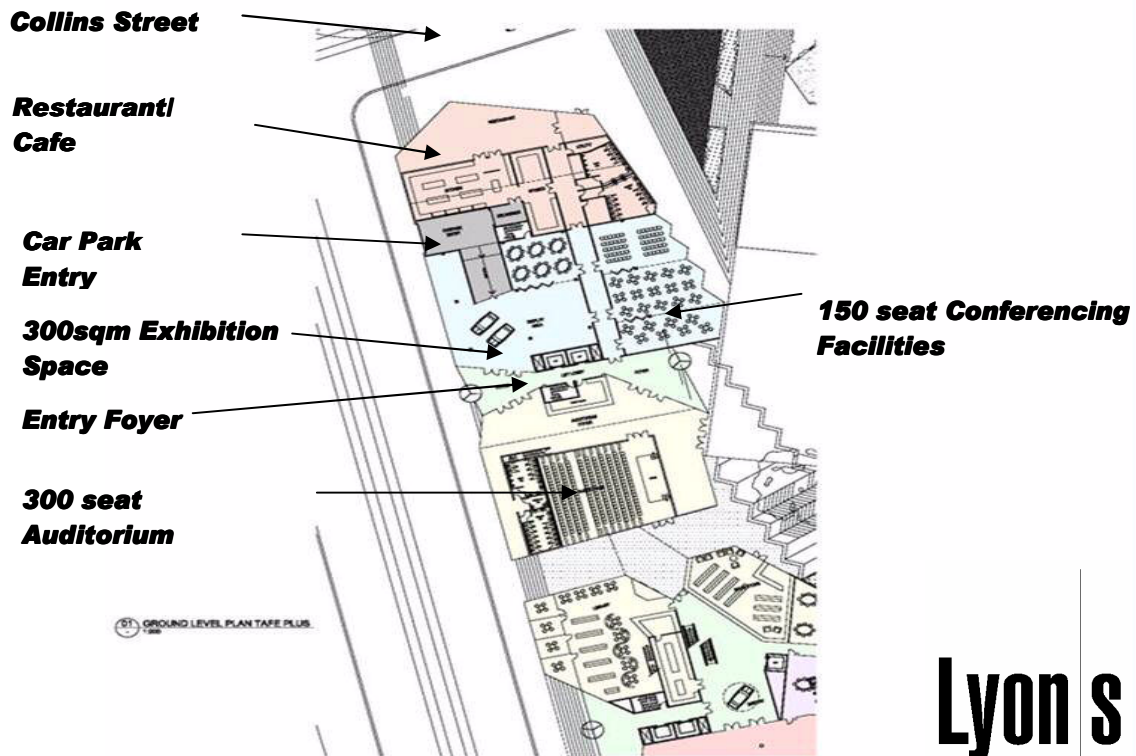
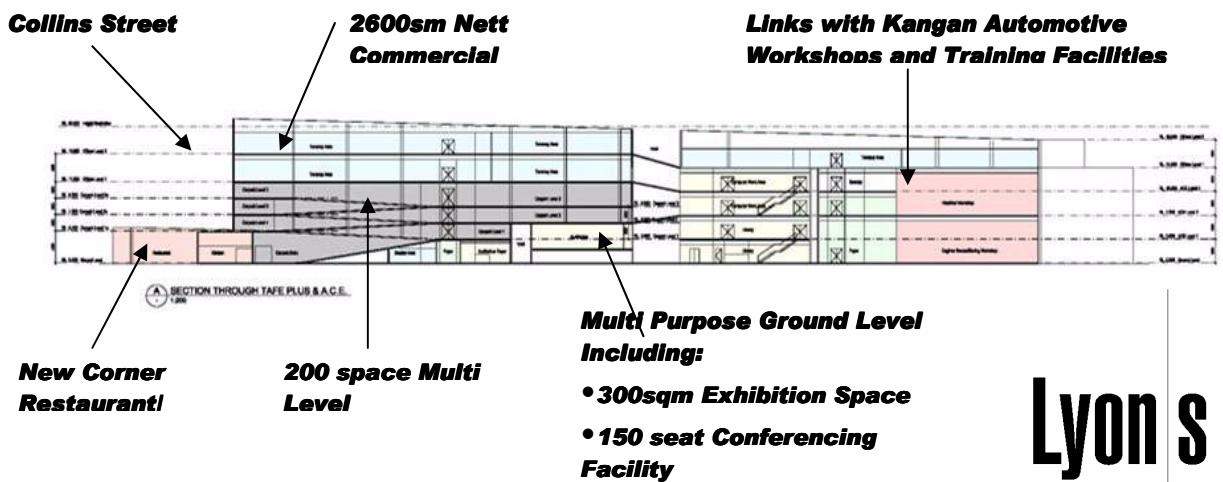


Figure 6 – ACE Stage 3 Elevation



ACE STAGE 3 – Commercial Building – Potential Users

The following is a list of users identified as potentially able to benefit from using ACE (Stage 3 - Commercial building) either directly as a tenant, or through the activity undertaken there:

- Industry – MVPs, Suppliers
- Fox Group – Automotive Museum
- Industry Advisory & Representative bodies
 - FCAI – MVP association
 - FAPM - Component Supplier association
 - Ai Group
 - Victorian Automobile Chamber of Commerce
 - TIFA - Tooling
 - SAE-Aust
 - Australian Automotive Aftermarket Association
 - AMWU
- Education bodies
 - TAFE – KBIT
 - Universities (Mech/Elect/Auto/Mechatronics) – Melbourne, Monash, RMIT, Swinburne, Deakin, La Trobe
- Other Training Organizations - Automotive Training Authority
- CRC's – AutoCRC, CAST, Composites, Welded Structures
- Centres of Excellence (COE's)
- VPAC
- R&D providers – VCAMM, CSIRO
- Contract Design & Engineering Houses
- Consultants – autoPOLIS, Deloitte Touche, KPMG, PWC, John Mellor,
- IT suppliers – Hardware and Software
- Miscellaneous Support Organisations

OTHER PROJECTS AND INITIATIVES

The Automotive Cooperative Research Centre (AutoCRC)

Vision: *To be the nation's principal, industry-led, collaborative research and development organisation for the advancement of an internationally competitive and sustainable Australian Automotive Industry.*

Funding: Over \$130 million cash and in-kind over seven (7) years including a \$38.5 million in federal funding.

Participants: Major Industry participants include Holden, MMAL, Air International, Australian Arrow, Schefenacker Vision Systems, Silicon Graphics, GKN-Aerospace and VCAMM Ltd. Industry participants will identify research priorities, define research deliverables, provide project leadership and implement outcomes, backed by two State Governments, R&D providers CSIRO, VPAC and Seeing Machines, as well as Key Universities from across Australia.

Figure 7 – AutoCRC Participants



The Cooperative Research Centre for Advanced Automotive technologies (AutoCRC) is considered as an enabler for a globally competitive and sustainable industry. Its visionaries and proponents recognize that Australia's future is dependant on a healthy manufacturing industry to support the country's economy and that this is a national imperative with federal support.

In terms of manufacturing Australia's future is in developing a niche business model:

- Ability to open quickly in a market, expand and then collapse before being overtaken by larger players.
- Techniques need to be responsive and success is dependant on computer simulation, with access to latest infrastructure through organizations such as VPAC.

The AutoCRC concept is all about upskilling the Australian manufacturing industry – it aims to address issues common to all manufacturing companies:

- ‘Fast to market’ solutions with less investment
- Industry needs support / exposure to the Innovation process
- Understand scenario planning and be able to make changes

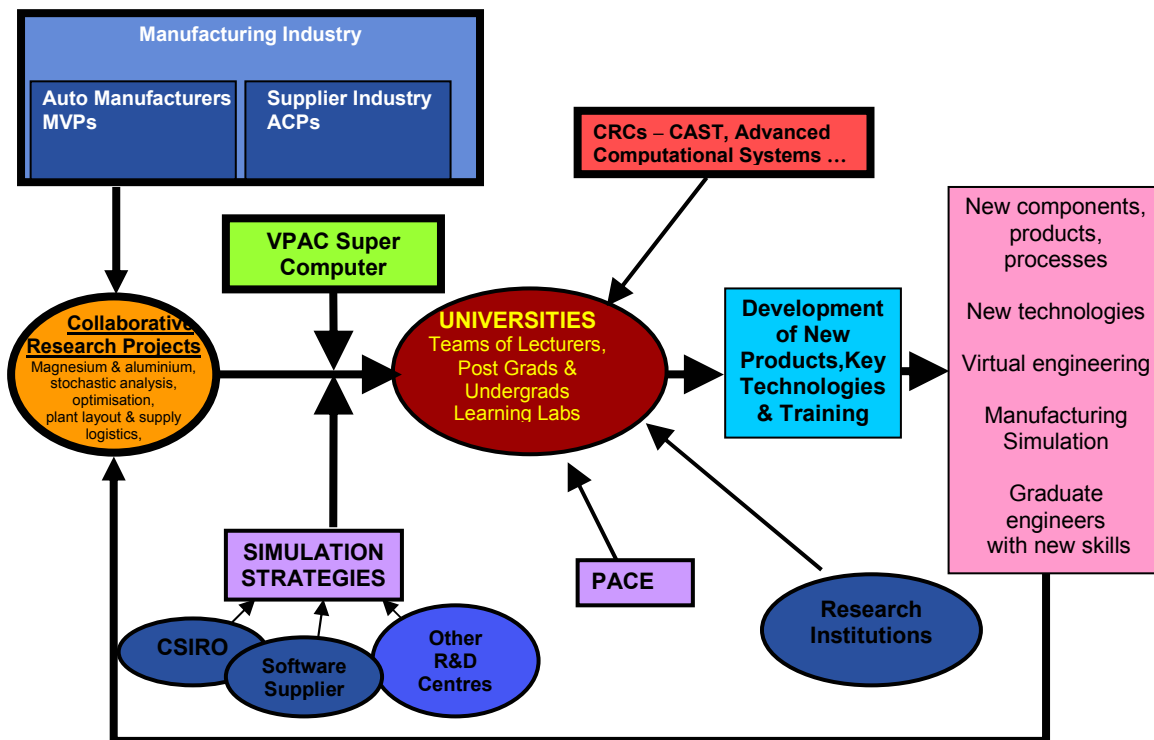
Automotive Research Themes

In terms of the automotive industry, the AutoCRC activity is about adding intellectual capability/value to support the development of fast and flexible manufacturing (logistics...supply chain) with a specific focus on product design, engineering, and development, with the aim of getting to market in 12 – 24 months, not 5 years, through the removal of physical prototypes and virtual certification.

The identified themes for the AutoCRC are as follows:

- Powertrains, fuels and emissions
- Materials and sustainable manufacturing
- Safety and Intelligent Vehicle Systems
- Virtual design/engineering
- Education

Figure 8 – AutoCRC Technology Collaboration:



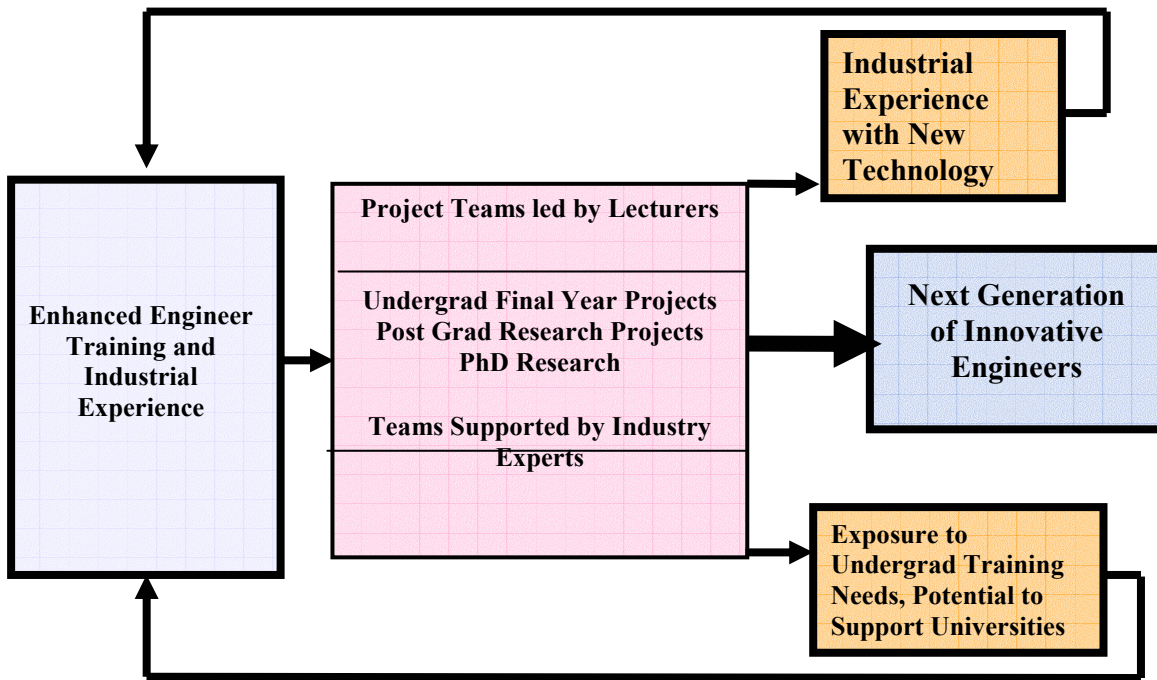
AutoCRC Engineer Training

AutoCRC is an education and training opportunity, providing training on-site within the industry partners for a large number of undergraduate and postgraduate students in engineering disciplines.

It will also engage university staff in projects so they are exposed to the evolving technologies and positioned to take these technologies back into their teaching programs.

Equally, the industry partners recognise a responsibility to provide technical expertise back into education/training programs. Together this will provide enhanced engineer training for the next generation of innovative engineers.

Figure 9 – AutoCRC Engineer Training:



Comment

At this point Holden and Mitsubishi are the only MVPs that are part of the AutoCRC, being amongst the founding members. In terms of the possibility of other MVPs participating, the AutoCRC indicates they are pursuing discussions with Ford on this matter. It is the aim of the AutoCRC to add both Ford and Toyota over time.

As of 17 July 2005, the AutoCRC was on track to incorporate and commence by mid August, with a significant number of initial research projects for its 16 founding participants and 5 supporting participants. A further 3 industry participants are expected to join shortly afterwards.

The AutoCRC is in the formative stages and is currently being housed at Holden Innovation, and are looking for a home. AutoCRC executive leadership considers ACE at Docklands to be an attractive location for the AutoCRC, firstly because it is a neutral place, and secondly, its location and building would be good for creativity. However because ACE Stage 3 is not ready now they are having discussions with Intelligent Transport Systems Australia (ITSA) about initially using the National ITS Centre of Excellence (NIC). ITSA is a member of the AutoCRC.

AutoCRC is considered a powerful resource, a catalyst, and an activity to aid growth, and as such is deemed to be a cornerstone in the ACE proposal.

Key to its future success is the appointment of a proven CEO with the skill, personality and power of persuasion to include the industry in to the activity of the AutoCRC.

Victorian Partnership for Advanced Computing (VPAC) ⁸

The Victorian Partnership for Advanced Computing (VPAC) is a leading, independent Advanced Computing R&D service provider. VPAC is a not for profit registered research agency established in 2000 by a consortium of Victorian Member Universities and with Victorian Government support. VPAC's members include:

- Deakin University;
- La Trobe University;
- Monash University;
- RMIT University;
- Swinburne University of Technology;
- The University of Melbourne, and
- University of Ballarat.

VPAC's mission is to provide independent expert services, training and support in Advanced Computing to VPAC Members, Industry and other organisations.

VPAC's goal is to maintain and build upon its position as a leading Advanced Computing R&D service provider in Australia, and strengthen its reputation and collaboration on all levels: Member, state, national, and international. Advanced Computing means, any application of computing that is outside the scope of traditional "off the shelf" or "packaged" applications such as email, spreadsheets, word processing, and accounting packages. Examples of Advanced Computing in R&D include:

- Large-scale computational models and simulations for scientific and engineering research.
- Development and support of custom databases for life sciences research.
- Development of specialized web portals to host/access research data.
- Visualization software and hardware for scientific research.

To support the Advanced Computing needs of its Members and other clients, VPAC operates a state of the art, internationally recognised High Performance Computing (HPC) facility and is also a founding partner of the Australian Partnership for Advanced Computing (APAC), which provides Victorian access to the National supercomputing facility located at the Australian National University, and access to other APAC programs.

As noted VPAC is part of the AutoCRC. A presentation shows they support the goals of:

- Accelerated Vehicle and Component Design and Engineering
 - 12 months instead of 2-3 years - Towards "Zero Physical Prototypes"
- Maintain Quality, Cost and Delivery
 - Automation, Integration and Optimisation of Virtual/Digital Design, Engineering and Manufacturing
- Maintain Strategic Competitive Advantage
 - Develop Virtual/Digital Design and Engineering capability tailored to support your company's UNIQUE processes and Innovation

In 2005 VPAC submitted an application to DIIRD for Science Technology and Innovation (STI) funding for a Centre for Design and Virtual Engineering in Automotive, Aerospace and Rail which was proposed to be located at the ACE Docklands precinct. Though the application was unsuccessful, VPAC envisaged a Centre of Excellence that would have enabled Automotive,

⁸ <http://www.vpac.org/>

Aerospace and Rail companies located in Victoria and Australia to adopt world's best practice and to develop unique local capability, in the areas of Design and Virtual Engineering.

The key activity of the Centre was to be the development and implementation of Design and Digital/Virtual Engineering technology on short and medium term industry-driven projects, to deliver improved products and processes at lower costs and faster times to market. The Centre would also engage and partner with other Centres who specialise in materials, manufacturing and physical tests to bring an integrated capability to organisations seeking these capabilities under the one umbrella.

Other activities envisaged for the Centre would be:

- Collaboration Forum - to share technology and expertise across industry
- Supply Chain initiative - to engage 2nd and 3rd tier suppliers
- Education - Curriculum development to integrate effective training and use of cutting-edge Design and Virtual Engineering technology into Higher Education courses and subjects, or tailored short courses for industry

Comment

VPAC is part of the AutoCRC and is a key organisation to support innovation activity for the automotive industry.

VPAC is currently looking for a facility having outgrown their current residence (co-located at Holden Innovation) and have indicated a strong interest in locating along with the AutoCRC into ACE.

Discussions have already started around signing a Memorandum of Understanding (MoU) between VPAC and KBIT on potential commercial arrangements.

VPAC is also in discussion with Intelligent Transport Systems Australia (ITSA) about locating to the National ITS Centre of Excellence (NIC) due to its ability to access the fibre optic infrastructure/network.

It is possible that this may be an interim move and VPAC could locate to ACE at the completion of Stage 3 – however discussion on a coordinated plan should be had amongst all affected parties as soon as possible.

The Victorian Centre for Advanced Material Manufacturing (VCAMM)

Funding:

\$5.0 million towards developing capabilities focused on advanced material technologies, composites and lightweight structures. Total project value is estimated at \$17.657 million.

Founding Consortium Members:

- Deakin University
- Monash University
- CSIRO

New Consortium Members:

- La Trobe University
- Swinburne University of Technology

The Victorian Centre for Advanced Materials Manufacturing (VCAMM) represented a new model in collaborative research when it was funded under STI Initiative, Round Two.

VCAMM is a virtual facility that provides analytical services and materials research to the manufacturing industry. VCAMM focuses on demonstrating opportunities in advanced materials to industry. It acts as a one-stop-shop to solve specific problems by assisting industry to access skills and infrastructure that support its specific needs.

New activities will include the demonstration of lightweight automotive technologies, low cost rapid tooling and metal alloys for biomedical applications.

Comment

VCAMM is part of the AutoCRC and is a key organisation to support innovation activity for the automotive industry.

VCAMM's industry focus will be used to provide its members and SMEs with a unique opportunity to interface with the AutoCRC.

The Advanced Centre for Automotive Research and Testing (ACART)

Funding: \$6.70 million towards development of three facilities, for research and testing of emission reducing technologies for new engines. Total project value is \$18.0 million (est).

Founding Consortium Members:

- Ford Motor Company of Australia Limited
- The University of Melbourne

The Advanced Centre for Automotive Research and Testing (ACART) aims to be a leading research and testing centre in the Asia-Pacific region, positioning Victoria as an active participant in the growth of advanced automotive technologies, and providing the local automotive and transport industries with state-of-the-art infrastructure and highly skilled personnel for advanced automotive research and testing.

The Centre will be located at two nodes:

- The Ford Australia Proving Ground near Geelong, and
- The University of Melbourne.

ACART will establish a new emissions facility, an environmental laboratory testing facility (both located at Ford Australia), and an engine dynamometer facility (at the University of Melbourne). Together these facilities will ensure that Victorian-based automotive manufacturers can continue to develop world-class products with increasingly sophisticated technology.

ACART's capabilities will span fundamental research studies of novel automotive technologies, through to testing and certification of existing products.

Comment

Concern was raised over the conflicting view of this facility. Firstly that it was funded by the Victorian Government through the Science Technology Innovation (STI) Infrastructure Grants Program (2005) outside of the collaborative AutoCRC activity which also is receiving STI funding – no attempt was made to integrate these and while it understood by DIIRD that the ACART facilities are to be made available for other Industry organisation the reality is expected to be totally opposite, particularly on the basis that they are independently managed with no ongoing accountability after the initial funding period. The integration of ACART with ACE and also the AutoCRC should be reviewed and encouraged.

National ITS Centre of Excellence (NIC)

Intelligent Transport Systems Australia (ITSA) is working to promote the National ITS Centre of Excellence (NIC). Organisations and companies that have already expressed interest in being part of the NIC include CSIRO, SAE, NEC, Pivod, Motorola, Computer Assoc and CISCO. The aim of the facility is to provide a state of the art, high quality, neutral territory that will be commensurate with the Government's direction on attracting international investment

The ITSA are keen to facilitate space in the NIC to accommodate many project teams. The proposed Centre would provide the local industry with a facility that would:

- Allow industry, SMEs and research organisations to have access to shared, state of the art infrastructure which would not usually be available to any one party,
- Encourage competitive researchers and competitive industry stakeholders to work together in a neutral collaborative environment,
- Reduce the financial burden on research institutions and SME's through access to shared infrastructure on an: 'as needs' basis,
- Assist in project management by co-locating diverse project teams drawn from multiple organisations,
- Gain additional leverage through clustering of researchers and service providers as tenants of the NIC, and
- Provide industry and governments with a venue that will incorporate technology and connectivity to allow access for:
 - disaster planning and scenario analysis
 - event management
 - service continuity (eg during planned maintenance or a system upgrade)
 - simulation and evaluation of new technologies and upgrades in a real time simulation environment

Comment

ITSA is part of the AutoCRC. Brent Stafford CEO of ITSA confirmed that the NIC is progressing and will be located at Rockley Drive, Port Melbourne from 20th September 2005 with an initial 5 year lease.

Auto-Aero Design Centre of Excellence (AADCOE) ⁹

Design Centre Model

Drawing upon the contributions of stakeholders, KPMG developed a potential model for an Automotive and Aerospace Design Centre of Excellence (AADCOE) to assist industry. Acknowledging the reservations of some industry stakeholders that a Design Centre could potentially duplicate or come into competition with existing functions and companies, the potential role of a Design Centre was proposed to focus on those areas in which there are existing, or anticipated industry gaps.

The Design Centre's core activities were envisaged to include a range of technical programs for the automotive and aerospace industries and provide expertise and facilities related to design tools, design techniques, relevant training, and collaboration in developing and undertaking applied research projects. The Design Centre could also identify and convey, to the automotive and aerospace industries, international design developments and opportunities.

The three variants for a Design Centre model

In considering possible roles the AADCOE might undertake, this model consisted of three variants:

a) **A 'minimal investment' variant** in which the Design Centre would be located close to or within a host organisation with design infrastructure, such as a university, and would have a small management staff comprising of a CEO and Business Development Manager.

b) **A 'shared investment' variant** in which Government investment would be matched by a partner organisation such as a university, Cooperative Research Centre or training organisation (ACE and Swinburne University of Technology were identified as possible hosts). Shared infrastructure could potentially include a design training facility, virtual reality studio, high performance computing, meeting rooms and project facilities. The management team would comprise of a CEO, Business Development Manager, Education Program Manager and a Business Manager/Administration Officer. Note - This option included a notional \$1.2m capital expenditure.

c) **A 'stand-alone investment' variant** in which the Design Centre would incorporate all equipment and facilities at a location separate from existing organisations. This variant would include independent ownership of a design training facility, virtual reality facility, meeting/conference rooms and project facilities (high performance computing would be accessed from existing providers such as the Victorian Partnership for Advanced Computing). The Design Centre would be located in close proximity to aerospace/automotive industries. Note - This option included a notional \$2.4m capital expenditure.

Core Design Program

The Design Centre would leverage understanding of global design, technology, business and industry trends and contextualise this to Victoria's industry development. This capability would enable the Design Centre to play an important role in respect to both its client industries and education/training and research organisations.

⁹ Automotive-Aerospace Design centre of Excellence Proposal: Consultation Paper (KPMG, for the Department of Innovation, Industry and Regional Development - March 2004)

Specific activities identified included:

- Advising industry and Government on key capability, infrastructure and technology gaps existing between the Australian industry and the world's major automotive and aerospace industries.
- Working with education and training providers to ensure highly relevant skill development for both the present and future industry workforce.
- Auditing Victorian industries' facilities and capabilities in order to:
 - *facilitate an open market in design services*
 - *assist organisations to obtain a greater return on facilities investments*
 - *identify key industry gaps*
 - *facilitate multi-partner acquisition of new facilities to reduce duplication.*
- Facilitating bids for major Australian or international contracts by consortia of local companies, supporting consortia through provision of platforms such as a design data repository and capabilities such as design data management.
- Showcasing, promotion and international links, giving national and international exposure to Victorian capability and promoting interest in design through conferences, seminars and international links.

Technical Program

Technical expertise and infrastructure would enable the Design Centre to contribute to, and act as host of, advanced projects and collaborations. The Centre's role in strengthening design-related training infrastructure, and in advising education and training organisations on design tools and techniques would also rely on its technical programs.

Two relevant areas would be:

- A virtual design program focussing on virtual design tools, design and product development management tools (including tools such as virtual reality) and the management integration of these tools into businesses.
- A computational engineering program focussing on advanced computational techniques for physical analysis and engineering design of components and systems.

Activities could be extended to areas such as materials, systems engineering and vehicle dynamics. Specific activities identified included:

- Developing and supporting collaborative projects that break new ground in the application of new technologies or techniques. Demonstration projects would provide a key mechanism for transferring knowledge and skills between research organisations and companies, also providing opportunities for graduate engineers to gain practical experience, and enabling academic staff to remain abreast of the latest tools and technologies.
- Experts working with client companies or collaborative groups to provide design expertise, including technical expertise in the use of existing tools, and development of new methods and tools and to address specific advanced problems.
- Undertake some research activities or collaborate with universities in publicly funded research to maintain advanced knowledge.

Infrastructure and Resources

It was envisaged that the Centre would require an Office to accommodate staff with appropriate facilities for collaboration including meeting and seminar rooms. Other facilities such as secure project spaces for ongoing use by collaborating teams may be required.

It was also proposed that a Design Centre own, share or access computing facilities and software such as:

- High-end workstations to support technical programs;
- A laboratory of high-end workstations designed to enable delivery of training in design tools to groups as well as use for other purposes such as projects;
- A range of industry standard design software; and
- A virtual reality centre to support technical programs, the Core Design Program and the Centre's role in provision of training infrastructure.

Technical programs would require access to appropriate computing resources and software and capacity to provide flexible access to computing and software for collaborating organisations.

Comment

The AADCOE proposal has not been taken past the feasibility stage because of possible duplication from a range of similar proposals. The model proposed for the AADCOE including the core design program is very similar to the vision for ACE while the technical program (virtual design and computational engineering) is similar to the AutoCRC which covers the automotive aspects of the AADCOE to a substantial degree. The only elements missing from AADCOE that are not picked up by ACE and AutoCRC are the connection with the Aerospace sector and the design centre. In fact DIIRD considers that an AADCOE co-located with the ACE would not work if the name of the facility was the Automotive Centre of Excellence.

Automotive Industry response in general is that the model proposed initially has far less relevance now than it did at the time of its drafting. Interviews with Industry CAD design/engineering providers indicates that higher level automotive industry demand for design has reduced significantly with completion of the next models in particular from Holden and Ford. Any additional CAD design work will be undertaken by MVPs and major suppliers with their own in house capability. Similarly Industry has no need for styling support – these capabilities reside in the MVPs. Any value for CAD design and styling infrastructure is in the education and training of future staff for the industry, including for SMEs.

The model proposed for the AADCOE could readily be reworked for ACE to take into account the more contemporary needs outlined for the broader automotive, aero-space and rail industry in this report.

South Australian Activity ¹⁰

The Centre for Innovation to be established in Adelaide

A recent announcement by the South Australian Government noted the fundamental importance of innovation for the South Australian economy, and that its competitive advantage, was based on the industries ability to innovate in these areas:

- The development of a new good or service;
- Implementing new operational processes to improve the manufacture or delivery of goods or services; or
- Improving organisational and managerial processes to enhance performance.

The Centre for Innovation will be established to provide specialist services and act as a catalyst for high growth South Australian companies to innovate, through the development of new products and services, improved processes and business practices and the application of advanced technology. It will include innovation nodes to the north and south of Adelaide to ensure access for local industry. These nodes are in the process of being established.

Services available to enterprises through the Centre for Innovation will include:

- Innovation support – promoting advanced tools and techniques, innovation and opportunity audits, access to specialist services (lean techniques, supply chain management, product development and process improvement).
- Commercialisation support – supporting businesses through the Techfast Program, of the Australian Institute of Commercialisation, and through advice on product commercialisation.
- Collaboration – linking industry needs with service providers (including universities) and providing access to State, national and international expertise.
- Cultural change – helping with the process of education, awareness raising and information brokering through a series of tailored programs and events for industry.

The Centre for Innovation will also provide advice on specialist areas including:

- Lean techniques
- Process engineering
- Supply chain and logistics and
- Product development

Comment

The duplication of similar parallel activity in South Australia indicates the timing is good for linkages between the two States around manufacturing, and the automotive industry in particular.

¹⁰ http://www.southaustralia.biz/Centre_for_Innovation/Centre_for_Innovation.htm

REVISED ACE PROPOSAL

Companies Interviewed

In accordance with the Project Agreement, VCAMM have made direct contact with the Victorian automotive manufacturing or related organisations that received the AISAG introduction letter from the Hon. Andre Haermeyer, Minister for Manufacturing and Export.

There were varying levels of response with a number of organisations (5) declining and others expressing a lack of interest reflecting what is believed to be a high 'interview fatigue'. While a number were interested, they did not offer a firm interview date and the Universities indicated a general preference to wait until Industry knew what they wanted before commenting in depth.

A list of the companies that were interviewed is shown in Table 1.

Table 1 – Companies interviewed

<i>Holden Innovation</i>	<i>Autoliv</i>
<i>TMCA and TTCA</i>	<i>Pilkington</i>
<i>Air International</i>	<i>FMP</i>
<i>Australian Arrow</i>	<i>Bosch</i>
<i>Diver</i>	<i>Australian Auto Air</i>
<i>MTM</i>	<i>AutoCRC</i>
<i>Pacifica</i>	<i>VIPAC</i>
<i>Volgren</i>	<i>EDAG</i>
<i>Marplex</i>	<i>Marand</i>

Note - Edited transcripts of the interviews conducted with these companies have been provided on a 'commercial in confidence basis' for the FAPM and DIIRD review only.

Interview Responses

Interviews conducted have indicated that Industry does support ACE as part of a comprehensive and collaborative response with Government as detailed further in Part Two of this report (Industry Initiatives) under the following headings.

- **Leadership**
- **Supplier Development**
- **People Education and Training**
- **Positioning (where Australia fits in the global marketplace)**
- **Product & Process Innovation**
- **Promotion and Communication**
- **Policy**

Industry acknowledges that ACE could assist in the three key areas:

- People Education and Training, as a facility to house provider(s) and activity focused on providing and integrated response to automotive skills needs, with offerings at all levels from TAFE diplomas to higher education MBAs.
- Product & Process Innovation, as a place to locate the AutoCRC and associated organisations such as VPAC, CSIRO and other R&D providers focused on innovation.
- Promotion and Communication, as a showcase for the Industry both locally and internationally, with activity to promote and connect the Industry.

However, in general, Industry sees ACE principally as complementary to the necessary strategic activity for the automotive industry to provide, the information, knowledge and processes needed for future success.

There were varying levels of sophistication in opinions on ACE - most agreed ACE could provide a focus for the Industry.

While most expressed support for the potential strategic value, many believed their individual company's use of ACE would be small – none identified business critical needs that ACE would rectify as a facility - however they did believe the industry as a whole would benefit by an integrated approach to the education and training of people, and from having a facility focused on R&D and promotion outcomes.

Some indicated the group that will benefit from ACE the most would be suppliers (SMEs) without sufficient financial resources, and that ACE would be of particular value in linking and resourcing those that are behind the wave in the current scramble for survival, both at a business and technology capability level.

Respondents also indicated that as individual companies, industry is not willing to provide funds for a capital works program. They would support ACE by accessing innovation and education/training programs and conference facilities on a fee for service basis.

The strongest support for the ACE came from Kangan Batman Institute of TAFE. They could see the opportunity to leverage the TAFE Stage 1 and 2 facilities to create a technology precinct, and were confident that with a good Board of Management they could attract the right automotive focused tenants to complement their TAFE activity. They considered that a Stage 3 Commercial Building could be readily let as office space to tenants from within the Industry, or potentially from elsewhere.

ACE Potential Activities

The range of potential activities for ACE noted from the interviews was as follows:

- **'One-stop-shop' - connection point**
 - Who, what and where to go
 - Interface for Government/Education/Industry
 - Alliances / collaborations
- **Education & Training**
 - Undergrad & Post Grad Auto Engineering
 - Business Management
 - Specialist Training & Workshops
- **Innovation – product & process**
 - AutoCRC & supporting providers such as VPAC
 - Access University capabilities
 - Access R&D providers eg CSIRO
- **Design facilities**
 - CAD/CAE
 - VROOM / ALIAS
- **Test labs – Shakers, laser CMM etc**
 - Specific items where sufficient support can be defined
- **Contract Support Services**
 - Project management
 - Prototypes
- **Industry Assistance / Information**
 - Advice / Mentoring / Advocacy
 - Benchmarking / Market knowledge database
 - Latest initiatives eg lean manufacturing, process control
- **Conference centre – auditorium, room hire & catering**
 - Supplier 'Discovery Days'
 - FAPM southern conference – 150+ people
 - Component show (AutoMechanica type)
 - Clinics eg JD Powers
- **Offsite meeting facilities - “Neutral zone”**
 - Varying room sizes including Board rooms
 - Serviced offices – Short Term & Long Term
- **Industry Display & Promotion – market Industry to youth, public**
 - Interactive display – 'hands on'
 - Similar to Science Works, supported by all Industry
- **Supplier Display Centre – FAPM support**
 - An environment to show wares
 - Demonstrate new technology / equipment eg robots

Discussion

The establishment of an Automotive Centre of Excellence (ACE) to consolidate direct and improve Australia's automotive focused infrastructure, and to enable the industry in being competitive and sustainable in the global marketplace has been supported by both the Ministers for Manufacturing and the Minister for Education. There has been a desire from Government to integrate education and training responses for the industry across departments through ACE and provide a facility that would support the Industry's endeavours.

However the delivery of recent automotive initiatives has been confusing to many in the industry. Industry has been unable to differentiate between the AutoCRC, ACE and AADCOE proposal. For example, while the AADCOE model was to provide a range of technical programs to the automotive and aerospace industries, including expertise and facilities related to design tools, design techniques, training, and collaboration in developing and undertaking applied research projects, this was not supported by Industry in its original form. On the other hand, the AutoCRC, which will conduct automotive related training, education and research but with the incentive of Federal funding has been supported. Activity has been further confused by the use of 'TAFE Plus' name in relation to the 3 Stage plan for ACE building.

Suffice it to say, ACE needs to be seen as a technology precinct / enabler for the automotive Industry – one facility with activity capturing key elements of what is needed to support the Industry in its quest to be competitive and sustainable in the global market place.

While Stage 1 and 2 provides a TAFE (KBIT) foundation, it is the 3rd stage (the 'TAFE Plus' element) linked to the Commercial Building and currently awaiting definition, that offers industry an opportunity to influence its future.

Some would consider that because industry is not prepared to fund the capital works for the proposed third stage of ACE (TAFE Plus), this indicates they are not ready for, or are not in support of ACE – however the contrary is true. The suggestion, as has been made, of waiting and surveying again in 2006 / 2007, possibly when the industry has put more time into working out how it can survive, and is clearer about what it needs, in order to get an 'improved response', is considered untenable.

Industry does indeed know exactly what its needs and the interviews conducted have indicated that Industry supports a comprehensive and collaborative response with Government, as outlined further in Part Two – Industry Initiatives.

In fact it is apparent from the interviews that help is needed in the very areas that ACE can facilitate – namely: ***People Education and Training, Product & Process Innovation as well as Promotion and Communication.***

What is also clear is that industry is very focused on keeping its head above water, at this present and difficult transition time, and that it collectively doesn't have the structure (or resources) to apply to working on ACE or similar proposals.

Consequently progress depends upon KBIT and Government partnering with potential tenants and seeking appropriate means of finance.

In terms of the building, it is considered that these responses can be accommodated in the current proposed design and footprint planned for the ACE Stage 3, Commercial Building (refer Lyon Architects images).

The opportunity to house automotive specific tenants and enabling activities will be embraced by industry. What is needed also, is a clear proposal, with a sound business plan for the Industry to sign-off on and embrace.

ACE – Recommended Elements

In terms of supporting Industry’s response, the following elements should be included in ACE:

A. Education / Training

There is a need to complement the Kangan Batman Institute of TAFE (Stage 1 & 2) activity with automotive specific higher education in engineering, manufacturing and management, and the facilities to supply these services, providing a pathway from certificate to PhD in automotive related competencies. Provider(s) should be selected based on vision, speed, responsiveness, and commercial arrangements.

B. Innovation Support, by housing -

- AutoCRC (Auto R&D, \$130 million over 7 years incl. \$38.5 million in federal funds)
- Victorian Partnership for Advanced Computing (VPAC)
- Offices for R&D providers eg CSIRO (entry point)

C. Promotion & Communication

Provide a neutral place to meet and highlight Industry activity –

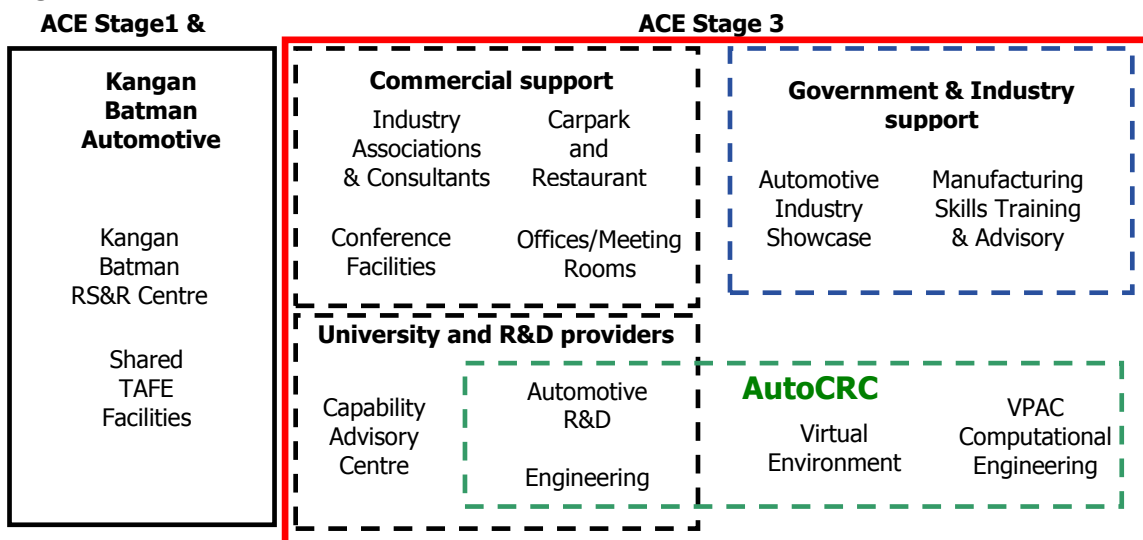
- Manufacturing Skills Training & Advisory Centre
- Automotive Industry Showcase
- Capability Advisory Centre

To support this it would be desirable to add key automotive and related associations (VACC RS&R, FAPM, FCAI, TIFA, SAE Aust) by providing offices and meeting rooms.

D. Commercial services

Conference rooms, the restaurant and car parking identified in the ACE Stage 3 commercial building design (Lyon Architects) proposal should be maintained.

Figure10 – Recommended Elements for ACE



Proposal for Industry

A documented proposal for Stage 3 of ACE based around the recommended elements should be developed to take to the marketplace. The priority is to support industry in the areas of innovation, technical and management education / training, as well as providing the opportunity for promotion and connection.

Documentation should be put together as quickly as possible to confirm the overall direction of the proposal and to engage key stakeholders. The proposal can be modified and tailored as required on a continuous improvement basis once dialogue with stakeholders is underway.

An industry backed initiative to complement the existing Kangan Batman Institute of TAFE plans (ACE Stages 1 and 2) by adding the higher education element and co-locating the AutoCRC and VPAC in particular, would see a significant competitive edge developed for the automotive industry.

ACE Board of Management

Leadership to take the ACE activity forward is needed. An ACE Board of Management (BoM) should be established together with the appointment of a Chairperson and Executive Officer (reporting to the Minister) to pursue the vision of an ACE and the support of industry.

Their activity needs to comprehend and include support of:

- The Automotive Industry – a total industry national view,
- Individual companies,
- Education, training and institutional research & development providers,
- Community & Government.

The BoM needs to be formed from all bodies committed to the concept of ACE and the future of the automotive industry, with appropriate sectoral representation:

- KBIT – owner and lead agents
- Developer (if relevant)
- AutoCRC CEO
- University(s) of choice
- Auto Industry representation
 - VACC RS&R
 - FAPM
 - FCAI
 - TIFA
 - SAE

Next steps would include the following action:

- Confirm all interested bodies, their needs and strategies.
- Appoint key people to the BoM and charge them to DELIVER the ACE proposal!
- Go to Industry and get buy-in on the proposal by key leaders.
- Gain commitment for support of the project – obtain MoUs.
- Obtain resources and funding to support future activity.

Business Plan – Financial Package

A Business Plan, including definition of a financial package, needs to be developed for ACE Stage 3. The package needs to include details relevant to concept development, design, project management, project finance, project documentation, construction, engineering, procurement, operation and ownership.

A GO-Strategies report for the Interim ACE Board ¹¹ records the previous actions taken in pursuing the viability of the development of extra floor space in the first stage of ACE to accommodate tenants from higher education and the automotive industry who would have intellectual and operating synergies with Kangan Batman Institute of TAFE.

The report identified:

- *Potential stakeholders, their Interests and Requirements*
- *Exploring Management Models*
- *Calculating Construction Costs*
- *Identifying Funding Sources*
- *Modelling Rental Costs*
- *Confirmation of the Rental Market*
- *Tendering the Financial Package*
- *Preliminary funding structure and key participation package for TAFE Plus partners*

While the conclusions were that it was not possible to put funding in place in time to incorporate extra space for TAFE Plus in the Stage 1 design, the marketing, management and funding issues that have been explored, provide a basis that can be built on in the future for implementation of Stage 3 Commercial Building.

KBIT has been advised that building Stage 3 as one continuous project with Stage 2 would be the most cost effective.

In terms of income, Industry and service providers would help finance ACE through leasing, and as fee-for-service payment for access to innovation & education / training activity.

Feasibility of Private Financing

Based on Industry response it would be difficult to develop a business case around their direct cash support as a Privately Financed Initiative ('PFI').

While it is theoretically possible to attract private sector finance capital to fund the project, searches of similar infrastructure activity in the public domain suggest that use of a special purpose finance vehicle (SPFV) may be required to be set up under specific legislation to provide an appropriate finance structure with maximum access to the depreciation provisions of relevant taxation legislation.

If the project was subject to full taxation under current law it could be a marginal investment, although it may meet the bench marks of some (particularly institutional) investors. On this basis there is generally limited interest in such projects among investors unless the SPFV provides substantial tax concessions, or other regulatory incentives such as guaranteed minimum utilisation levels for infrastructure. In addition, private sector commercial financing is extremely complex and expensive to set up.

¹¹ Report to Interim ACE Board 18Nov2003 (GO-Strategies Pty Ltd)

Private funding has been tentatively explored by KBIT with a couple of superannuation funds (eg MTAA Superannuation fund or Superannuation Trust of Australia via IFPT, Industry Funds Property Trust) – support exists based on a 60% tenancy by area.

Build/Own/Operate/Transfer Financing schemes

The option of Build/Own/Operate (BOO); Build/Own/Transfer (BOT), or Build/Own/Operate/Transfer (BOOT) schemes is also possible. Increasingly, utilities infrastructure projects in Australasia are being delivered in this manner. This type of project requires complex financing arrangements, along with a sophisticated approach to risk management solutions - however this option is considered a source of up front finance rather than of ultimate funding. Such schemes are usually joint ventures between State Government, and/or Local Government and the private sector in which a SPJV is created to build and own infrastructure.

Public / Private Partnership

Another possible option, which some consider preferred, is a shared investment model where the Government enters into a Public/Private Provider (PPP) arrangement for the commercial building with a private developer for Stage 3, knowing that tenants could be found and that there could be non-automotive tenants if the targeted organisations falter.

Example, Queensland's Southbank Education and Training Precinct (TAFE)

The Queensland Government recently (Apr 2005) approved its first Public Private Partnership to provide Queensland a new education and training precinct – the \$230 million re-development of Southbank TAFE. Premier Peter Beattie announced that the Southbank Institute of TAFE at South Bank Parklands, would be redeveloped and maintained by the Axiom Education Queensland Consortium

Mr Beattie said. "Public Private Partnerships are about Value for Money - quality facilities that are properly maintained over time, at a competitive price "

The Axiom Education Consortium will build the TAFE, maintain it for the contract period, then hand the asset back to the Queensland Government. The 'whole of life' project is valued at \$550 million.

The successful tenderer, Axiom Education Queensland Pty Ltd, is a consortium of three companies:

- ABN Amro, a provider of wholesale and investment banking products and services.
- The John Holland Group, a diversified construction contractor and a provider of operations and maintenance services to the rail, telecommunications, building and heavy engineering sectors.
- Spotless Facilities Management, providing property services and project and facilities management.

The project, underwritten by ABN AMRO as part of its contract with Axiom, involves the construction of new facilities and refurbishment of some existing buildings at Southbank TAFE Institute campus, and consolidates a number of campuses into one that will accommodate over 30,000 enrolments. In addition to the campus facilities, the development will include retail outlets supporting the Institute's business, serviced apartments and accommodation to house over 200 students.

At the end of the construction period (approximately four years) Axiom will be required to maintain the facilities for a further 30 years under a performance based contract with the Government. Axiom Education has also won further contracts with the NSW Government for the construction of nine school contracts with operation until 2032.

Using PPPs is a new model of investment for education infrastructure in Australia - private investment in infrastructure with leasing back premises to the State, allows resources to be released to be spent on the real business of education – teaching and learning.

Partnerships Victoria Program

Partnerships Victoria is a policy of the Victorian Government, giving effect to a commitment to optimise the level of infrastructure spending through a responsible use of the resources of both the public and private sectors. Value for money and the public interest are defined as keynotes of the policy.

The *Partnerships Victoria* website¹² assists project proponents, investors, bidders, citizens and government departments and agencies by providing guidance materials, information on projects and details of contacts in departments. The major stages for PV project activity are also identified (refer Appendix).

The projects identified are where the Victorian Government has entered into PPP arrangements with private developers under varying arrangements.

The ACE Board of Management should consider the opportunity to enter into a Public Private Partnership as one possible financing option – the potential value and likelihood of success can be further determined through use of the guidance material on the website.

Timeline – an issue

There is an urgency to undertake this action now – to fully define the proposal for approval and for immediate implementation based on intention for Stage 3 to start in 2006 coincident with Stage 2.

Action: Work with Kangan Batman Institute of TAFE to estimate timing and whether Stage 3 could proceed with Stage 2 - assuming the finances can be worked out.

Staging

Stage 1	Stage 2	Stage 3 – Business Plan Required
<p><i>TAFE - Body Fabrication and Paint</i></p> <p>Funded - construction started</p>	<p><i>TAFE - Transmission, Engine, Electrical, Motorsport Brakes and Fuel</i></p> <p>Planning and construction funding being sought.</p>	<ul style="list-style-type: none"> ▪ <i>Higher Education</i> <ul style="list-style-type: none"> ○ <i>Engineering Training & Management Training</i> ▪ <i>Innovation</i> <ul style="list-style-type: none"> ○ <i>AutoCRC</i> ○ <i>VPAC</i> ○ <i>R&D provider interface eg CSIRO</i> ▪ <i>Promotion (Govt / Industry Support)</i> <ul style="list-style-type: none"> ○ <i>Manufacturing Skills Training & Advisory Centre</i> ○ <i>Automotive Industry Showcase</i> ○ <i>Capability Advisory Centre</i> ▪ <i>Commercial Support</i> <ul style="list-style-type: none"> ○ <i>Industry Association Offices</i> ○ <i>Consultants</i> ○ <i>Conference/meeting rooms</i> ○ <i>Restaurant & Car parking</i>

¹² <http://www.partnerships.vic.gov.au/>

Recommended Stakeholder Actions

- *Go forward with the creation of an Automotive Centre of Excellence (ACE) to consolidate, direct and improve Australia's automotive focused infrastructure, to enable and support the industry in being competitive and sustainable in the global marketplace.*
- *The third stage of the ACE, known as TAFE Plus, should incorporate the following elements and supporting organisations:*
 - *People Education and Training – include higher education, technical and management training provider(s).*
 - *Product & Process Innovation – include AutoCRC, VPAC & R&D providers eg CSIRO.*
 - *Promotion and Communication – include conference and meeting rooms, as well as space to house industry associations (FAPM, FCAI, VACC Tech Services etc).*
- *As a matter of urgency, a detailed and fully costed Proposal / Business Plan for the Third stage of the ACE should be prepared (over a three month time frame) to accelerate the planning needed for a commitment to Stage 3, so that it synchronises with the approval for Stage 2 of ACE.*
- *The proposal should be based on the existing design of the Stage 3 Commercial Building (Lyon Architects) to provide the extra floor space and facilities to house the identified tenants – final content and specific requirements to be negotiated with interested bodies.*
- *The Business Plan presented to the Minister should identify the cost of Stage 3 and investigate a number of funding options, identifying in each case the level of funding that the Victorian Government would need to provide.*
- *To progress the proposal an ACE Board of Management (BoM) reporting to the Minister for Manufacturing & Export should be established with a Chairperson and a full time CEO (and appropriate support staff).*
- *Initial financial support for the BoM should be sought from Industry stakeholders and the Victorian Government on an agreed basis, to allow the BoM to deliver the proposal.*

INDUSTRY COMMENTS

- *The Industry is facing a major restructure... the losses will be high... Automotive potentially could go the way of the Textile industry... there may not be anything left in 10 to 15years... the question is 'what do we do?'*
- *Some are very sceptical about anything to save the Industry based on its current position – things have changed a lot in the last 5 years*
- *There is an increase in the amount of overseas sourced components... suppliers are already going offshore to remain competitive and people are being laid off*
- *Most believe the recent FAPM/AiGroup/KPMG report - 40% of component manufacturers expect to source offshore by 2006...*
- *Australia automotive manufacturing is moving to global platforms... manufacturing will be anywhere in the world... some assembly here but only while cost effective*
- *Australia wont be able to compete with the "New Tigers" (China and India) in labor intensive products.*
 - *Cost base – due to regulated labour market & over inflated currency - India CAD @ 15euro/hr versus 50euro/hr in Australia while China manufacturing labour \$200/mth (includes all overheads, no union etc), to Australia @ \$3000/mth*
 - *Availability of resources/skills - India has good quality people in large numbers all taught CATIA v5 (aerospace) for the full 4 years of university - China is turning out more engineers than USA*
- *India and China know what they want to become... they are manufacturing & technology focused*
- *China is after knowledge transfer from the German, American and Japanese auto companies so they can go it alone....they are already the 3rd largest car market...they will soon have more capacity than demand... the expectation is that China will export cars to Australia before the FTA!*
- *We wont be able to compete without embracing the competition... its critical to know what is happening in places like India and China*
- *We have a disjointed industry with individual and duplicative responses ... initiatives aren't integrated... we are not coordinated and are missing opportunities..*
- *We need to define real metrics to help identify the reality – just because 1 million vehicles are sold doesn't mean the domestic Industry is healthy*
- *'Business as usual' and 'working harder' is not going to work... the world has moved on ... the situation is accelerating... the global industry is going through the same transition - "Its not a cycle it is a change"*
- *We need to keep positivewe need to look for the opportunities...*
- *Industry needs to be strategic - formulate a specific answer given the situation... its not just automotive – its all manufacturing – but automotive is key and could take the lead*
- *We need to identify our competitive advantage ...identify differentiators, and our niche... we need to support where we are going – we need a futuristic view to allow transition*
- *Innovation in product, process and business appears to be a key*
- ***What is needed is leadership, vision and strategy at a national level***

Part Two - INDUSTRY INITIATIVES



Introduction

The interviews conducted indicate that Industry does support a comprehensive and collaborative response with Government.

In documenting industry response with the objective of forming an action plan with specific recommendations, we have elected to use the format of the ***Automotive Industry Strategic Action Plan (2001 to 2011)*** developed by the Victorian Government, Department of Innovation, Industry and Regional Development, Office of Manufacturing and Service Industries.

This plan, developed on behalf of the Victorian automotive manufacturing industry, was formed with the input of an Industry Working Group and has been structured with the overarching vision, strategic direction and priorities that set the context of the Plan. The 'action' part of the Strategic Plan is how the Victorian State Government and local Industry are going to work towards achieving the vision. A mid-term review of the Plan has just been completed, and it is understood that the findings and a revised plan will be reported shortly.

This *Automotive Industry Strategic Action Plan* identifies key objectives and initiatives around a number of themes (starting with letter P). We believe this forms a good template to capture and present the responses from the AISAG Project. As such we have aligned the output from the interviews into a number of similar themes (starting with the letter P) also adding an additional "P" (Priorities) as a result of the findings.

On this basis, the responses from interviews with industry and the key learnings from subsequent activity have been captured in the following section and documented under the following headings:

- ***Leadership ****
- ***Supplier Development ****
- ***People Education and Training***
- ***Positioning - where Australia fits in the global marketplace***
- ***Product & Process Innovation***
- ***Promotion and Communication***
- ***Policy***

*Priorities

Working Groups were formed to identify specific action in relation to these initiatives, and where output has been generated, this has been incorporated into the discussion.

In addition, a number of recommendations have been made that could form the basis for a strategic action plan in support of the Australian automotive manufacturing industry.

Finally, the whole Australian industry needs to pull together more consciously in tackling common challenges, such as national technology development, the appropriate use of ACIS, the thorny but critical issue of industrial relations - and making the Australian industry more visible abroad.

Australia can influence developments to some degree, and notably its own future. But the time window is fairly narrow. Start now and be able to show decisive change - and results - within the next 5 years.

Everyone needs to support the transition

To reduce the recommendations to one liners:

- *Suppliers: take charge of your destiny;*
- *Vehicle manufacturers: be more sensitive to your local environment and supportive of the industry as a whole;*
- *Governments: promote change, as did Button, rather than protecting;*
- *Unions: understand what makes for a modern automotive economy.*

autoPOLIS report for the FAPM - April 2005¹³

Leadership

Background

Automotive Manufacturing Industry Stakeholders

Industry stakeholders include; car, truck and bus assemblers, component manufacturers, aftermarket parts and accessories manufacturers, design service providers, tooling and equipment providers, industry associations, employer groups, unions, education and training providers, the State Government, and the Federal Government.

Industry Organisations

- The Federation of Automotive Products Manufacturers (FAPM) is an association of manufacturers engaged in the production of a comprehensive range of automotive products.
- The Federal Chamber of Automotive Industries (FCAI) is an organisation representing the four passenger motor vehicle manufacturers and all major international brands importing and marketing passenger, light-commercial and four-wheel drive vehicles and motor cycles in Australia.

Victoria State Government

- The Department of Innovation, Industry and Regional Development (DIIRD)
 - Business Development Division
 - The Office of Manufacturing and Service Industries (OoM)
 - The Automotive, Aero-space and Defence Unit
 - The Office of Science & Technology (OoST)
- The Department of Education and Training (DE&T)

¹³ *autoPOLIS report: A Vision for the Australian Automotive Industry – Prepared for the Federation of Automotive Product manufacturers – April 2005*

South Australian State Government

- The Department of Trade & Economic Development (DTED)
 - Business Services Development Group
 - Industry Development – Automotive
 - Product Development
 - The Office of Manufacturing
- The Department of Further Education, Employment, Science and Technology (DFEEST)

Federal Government

- The Department of Industry Tourism and Resources (DITR) – includes AusIndustry
- The Departments of Education, Science and Training (DEST)
- The Department of Trade and Foreign Affairs (DTFA) – includes Austrade

Note - The DITR advises the Australian Government and develops and implements policies which should promote the competitiveness of the Australian automotive industry through transition. Strengthening the linkages between Australian based firms and the global industry is seen as an important part of this approach. The Department also conducts research and analysis to underpin policy formulation and evaluation, including the electronic publication of Key Automotive Statistics. It provides advice on general automotive trade issues, including advice on the implications for the automotive industry of proposed Free Trade Agreements. The DITR recognise both the FCAI and FAPM as representing the Australian automotive industry.

Past Industry Leadership Initiatives

Automotive Trade Council – circa 2000 to 2002

The *Automotive Trade Council (also known as the Automotive Council)* was co-chaired by Ministers (2), and comprised of senior industry executives. The Council aimed to define objectives and broad directions for the Strategy, and to oversee the implementation of the Strategy through:

- the *Prime Minister's Special Automotive Envoy*, spearheaded representations to foreign Governments and companies to secure access to markets and global supply chains;
- the *Automotive Market Facilitator* and the Department of Foreign Affairs and Trade, charged with a program of comprehensive market access negotiations;
- Austrade, delivering a four year *Automotive Market Development Program* for the industry in key regions under a purchaser provider contract with the Department of Industry, Science and Tourism

The Council did actually produce some output (Appendix) but it never made its way into the public arena and the Council was eventually disbanded.

Australian Automotive International Business Group (AAIBG) - circa 1983 to 2000

The Australian Auto Export Group (AAEG) was started with an original charter to encourage automotive exports and help suppliers (particularly SMEs) – it was transformed into the Australian Automotive International Business Group (AAIBG) in recognition of the bilateral nature of Industry (inbound trade reality) and conducted trade missions and seminars explaining the benefit of export. Its membership consisted of FAPM, Austrade, Vic & SA Govt, MVPs, Suppliers, SAE, AAAA, VACC etc.

While it was deemed of value initially it was eventually considered too big & inclusive and also seen as a competitor to FCAI & FAPM – finally it was made a sub-committee to report to the executives of both the FCAI and FAPM, and with minimal resources was eventually put into hibernation.

The comment was made that the AAIBG was very successful in relation to improving exports - it was specifically export focused, conducted trade missions and engaged foreign delegations. It is believed that unless there is a similar focus to expand the Australian domestic industry's revenue base through export, that the industry will not grow significantly from where it is, if at all.

Industry Comments

The majority of respondents believe there is a place for a national industry strategy - some call for a new 'Auto Plan', as significant as the Button Plan, with a 3 - 5 year outlook to:

- *Promote Australian automotive industry strengths*
- *Make changes to successfully transition into the global marketplace*
- *Attract ongoing investment for the future*

There is strong support from the supplier base for improved Industry leadership to deliver this:

- *The timing is right*
- *It needs to be Industry driven*
- *It requires a concise Action Agenda*
- *Collaboration & coordination are key*

Leadership is key in this transition period – everything rises and falls on leadership.

"If we continue to do what we always been doing we will continue to get what we always have been getting".... its time for a change.

Current Industry Leadership

The current representative structure does not create a consolidated voice for the broader industry. The representative associations, the FCAI and FAPM, have different agendas in representing their members.

The FCAI while representing the four MVPs also represents all the importers who are supplying over two thirds of the vehicles sold here. The local MVPs are also amongst the largest importers with an associated tension between keeping their local manufacturing operations healthy while providing a range of products in the marketplace.

While the MVPs participate in various forums – sometimes working with suppliers – many times they deal direct with Government departments, and Ministers, in order to look after their own interests. There is not necessarily always agreement by MVPs on key issues – agreement tends to be on non-political issues such as fuel economy goals, rather than on issues that may impact competitiveness, such as what activity needs to be taken for the Industry.

The FAPM represents the Australian Component Producers (ACPs), some of which are locally owned (particularly the SMEs), but many of which are multi-nationals. Historically FAPM has rallied its members around specific causes, but has found it difficult in finding support when it comes to the larger cross-industry issues – however it has been identified¹⁴ that the FAPM has a key role to play in driving forward initiatives for the Industry.

However, the challenge faced by the industry is too great for any one organisation to address. It requires collaboration between all stakeholders.

¹⁴ *autoPOLIS report: A Vision for the Australian Automotive Industry – Prepared for the Federation of Automotive Product manufacturers – April 2005*

The answers ultimately lie in the senior Industry and Government people - its time to get the Industry leaders together for robust discussion, not just about ACE but what is needed for the future.

We need to understand where the global industry is going, the opportunity for Australia, and what will enhance the performance of the Industry - the aim should be to identify common ground, the options, and way forward for the industry.

Note: Outcomes are needed for the whole industry – both the MVPs (and their HQ's in Detroit and Japan) and the ACPs – cooperation is critical.

Proposal – Single Leadership Group

To move forward, what is believed to be needed is a single leadership body representing the needs of the Australian automotive manufacturing industry, not necessarily that of motor vehicle importers.

Various options have been proposed and considered. AISAG believes a new (3rd) Representative Body was considered untenable. A possible joint venture between the FCAI and FAPM may work, but in order to eliminate barriers the best plan would be to form a single leadership group by engaging the existing representative groups and stakeholders (a similar conclusion was reached for the Aero-space industry¹⁵).

Proposed is an **Automotive Industry Council (AIC)** - key elements would include:

- *A national strategy*
- *Independence*
- *Funding by Industry & Government (seeded?)*
- *Involvement by the Vic & SA Government*
- *Federal Government support– Education (DEST), Industry (DITR) and Trade (DTFA)*
- *A focus on Manufacturers – not importers*
- *Inclusion of the FCAI/FAPM, key MVPs & ACPs and Unions*

The AIC would have the following objectives:

- *Define a vision, strategy & desired outcomes for the industry*
- *Produce an action plan*
- *Facilitate collaboration & coordination*
- *Develop Policy as required*

In terms of the process of going forward, the learnings¹⁶ from Carlos Ghosn's leadership, in recently turning around Nissan's fortunes, were noted as relevant:

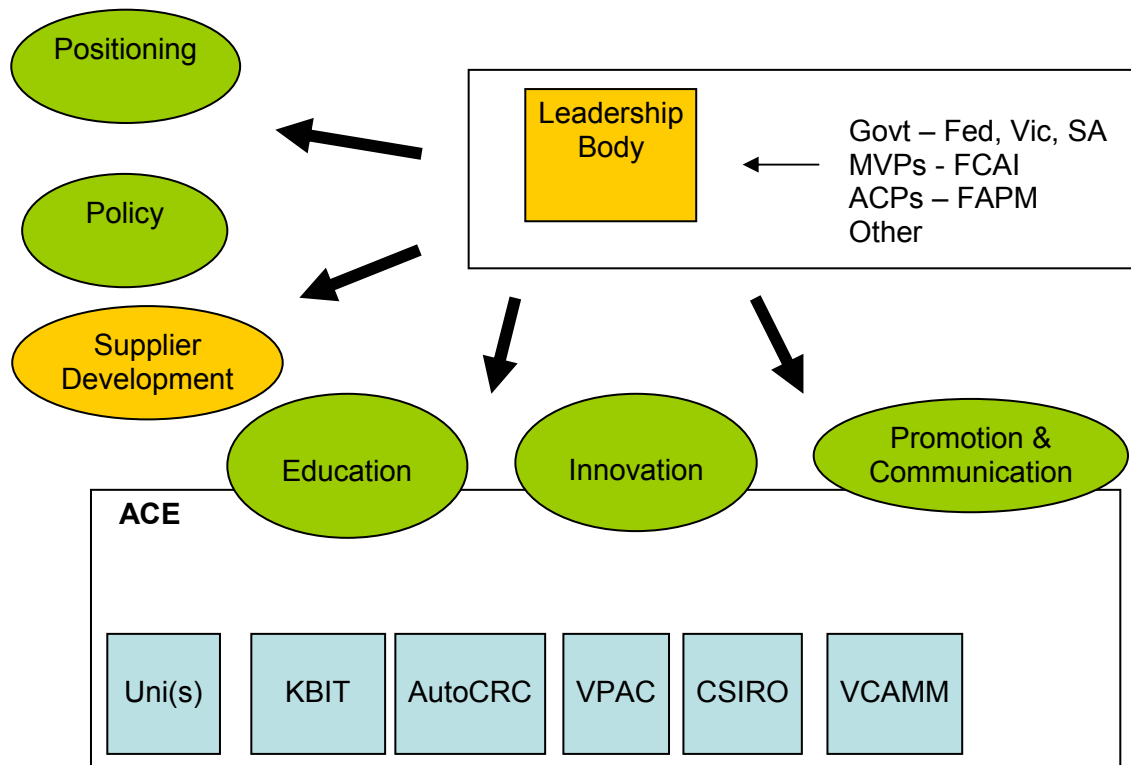
- *Its important not to define the solution ... but the mechanism....no sacred cows*
- *Get the key players together*
- *Form teams – say up to 10 people and a chairman/neutral facilitator – address the various issues facing the Industry - identify a way forward*

The issue is timing – Industry needs to ask itself “what do we want in place by 2010?”

¹⁵ *Partnering in the global context: an Australian aerospace industry for the 21st century - Report of the Aerospace Industry Action Agenda - An initiative of the Department of Industry, Tourism and Resources (August 2003)*

¹⁶ *The Global Leadership of Carlos Ghosn at Nissan - 2003 Thunderbird, The American Graduate School of International Management.*

Figure 11 - Leadership and Related Initiatives



Strategic Action Plan

The Industry needs a ‘business plan’ with a vision, strategy and actions designed to strengthen automotive manufacturing in Australia. An action plan could be picked up by a national automotive industry leadership group (such as the AIC) to lead / coordinate all major activity, to promote the global competitiveness and sustainability of the Australian automotive manufacturing industry.

At a Federal Government level, the vision for an industry is defined as an action agenda.

“Action Agendas are industry driven strategies that allow the industry to work with governments to identify and capture opportunities for future growth and development”

Bruce Grey, Chair, Adv Manufacturing, Strategic Industry Leaders Group

The Government strategy for the Automotive Industry was set out by the Hon. John Moore, as Minister for Industry, Science and Tourism in the Automotive Action Agenda in 1998.

Automotive Action Agenda

- *The Australian automotive industry must reposition itself as a niche global player.*
- *Its assets include its structural depth, its R&D, its access to light metals and its position in the region.*
- *Government will assist the industry to invest in its global future and will help secure export markets, while maintaining the pressure for further improvements in productivity, quality and innovation.*
- *Industry must take advantage of these measures to establish its global future on a competitive, self-sustaining basis.*

With the resulting policy (2002) which defines revised tariffs and ACIS support through to 2015, the Federal Government considers the Automotive Action Agenda completed. However, as in any business, it was thought that this plan needs, and the performance of the Industry needs, to be revisited by the stakeholders, at least on an annual basis, and should never be seen as being complete as such.

Relevant Action Agendas

The Advanced Manufacturing Action Agenda was announced on 25 October 2004 by the Minister for Industry, Tourism and Resources, the Hon Ian Macfarlane MP.

The Advanced Manufacturing Industry is defined as covering precision engineering, machine tool and die/mould making, robotics and other automated equipment for manufacture and general engineering and design for manufacture.

Advanced Manufacturing Action Agenda Working Groups -

- *Building Workforce Capability - Education, Training and Skills*
- *Capturing Opportunities – Market Access and Development*
- *Measuring the Industry – Statistics and Performance*
- *Working Smarter – Technology and Innovation*

As a result of the Working Group activity, Discussion Papers have been prepared for stakeholder comment.

A recently developed Action Agenda also exists for the Australian Aero-space Industry. There is the possibility for the automotive industry to benefit from the learnings gained in this activity.

Common Issues

The issues facing the automotive industry are common to all manufacturing sectors in Australia – there have been various plans identifying possible themes.

The Manufacturing Industry Consultative Council (MICC) identified the key success factors to move Australian manufacturing to a higher growth path as:¹⁷

- Productivity Enhancement and microeconomic reform to lift competitiveness.
- Additional foreign direct investment in new capacity in key industries that generate additional net exports
- Improve Perceptions of Manufacturing to enhance recruitment / retention, community and financial sector support.
- Broad based additional growth in business investment in research, development and other forms of innovation that generate additional net exports.
- Strengthen the Export Sector with more firms exporting more production to World Markets.
- Strengthen the Education / Training and Skills Infrastructure to lift competitiveness.
- Building a world class private equity venture capital industry that helps more manufacturers generate additional net exports.

The Victorian Government also noted the Automotive Manufacturing Industry must make improvements and address a number of significant issues¹⁸ including the development of a shared vision for the future, along with improved communications and information flows across industry.

¹⁷ *Victoria's New Manufacturing Future (MICC report)*

¹⁸ *Victorian Automotive Manufacturing Industry 2001 to 2011 – Strategic Plan (Dec 2001)*

One thing that has been missed in most plans to date is the need for leadership.

Leadership is the key for the future - the right people with the passion, skill and authority to be able to get something done.

AISAG Future

The issues are important and leadership is required to address them. While AISAG has completed its brief, it remains to be seen whether the current leadership groups are capable or motivated to work for a national industry strategy. AISAG may need to broker and provoke the activity further.

AISAG could facilitate the creation of an Automotive Industry Council (AIC) – contributing or acting as a catalyst.

The key is to discuss the issue of leadership with the responsible Industry Ministers.

There may well be a need to go and clarify with MVP HQ's in Detroit and Japan their position in establishing a long term plan for health of the Australian automotive industry.

Input is now needed on how this single leadership group should think and act to address the Industry's concerns.

Recommended Stakeholder Actions

- *Stakeholders establish a single leadership group for the Australian Automotive Manufacturing Industry – this group may include MVPs, suppliers, the FCAI, the FAPM, the SA & VIC State Governments and the Federal Government*
- *The Leadership Group identifies a new action agenda for the development of a strategic business plan for the Australian automotive manufacturing industry.*

Many of the pressures and problems of the global supplier industry are increasingly being shared by the Australian suppliers. They include relentless imposition of customer driven “cost downs”, price pressures from low labour cost countries, inability to recoup cost increases arising from higher commodity prices, and the poor perception of the industry in financial markets.

As if that were not enough, the Australian market place adds its own particular challenges for suppliers:

- *A small domestic market (by world standards), which makes global scale production difficult to achieve from an Australian operating base*
- *Only a few suppliers who sell to all four local manufacturers, leaving many vulnerable to the loss of a single customer, or indeed a single major contract*
- *Workforce costs and rigidities*
- *The increasing tendency for our customer’s purchasing – and other decision making – to be done offshore*

FAPM Executive- June 2005¹⁹

Supplier Development

Industry Comments

Multinational MVPs need regional manufacturing as part their global business strategy. The local MVPs are multinational businesses and as such are looking for globally competitive suppliers.

The MVPs note that suppliers need to be both ‘competitive’ (in terms of cost, quality, delivery etc) and ‘capable’ from a technology innovation point of ‘view’ – local suppliers also need to be internationally focused and networked, able to support global platforms in every market in the world, in order to gain attention in a World-Wide sourcing environment.

However, the major driver remains cost. As a result local suppliers have lost contracts to overseas competitors. Also because some MVP contracts require intellectual property (IP) to be surrendered (World-Wide purchasing policy, terms and conditions). some locally developed designs and engineering work (IP) has been transferred to low cost countries.

MVP global sourcing strategy and FOB based pricing has had a major impact on local supply base health. The damage is significant – Industry expectations are that all upcoming models (Ford Orion, Holden VE, Toyota Camry) will have higher than previous content of imported parts (one major new model is thought to have local content as low as 58%) – as a result the local supply base is being seriously eroded.

The change in offshore sourcing and lost contracts overseas for the local industry has led to recent announcements of job losses at Trico, Autoliv, Calsonic, Webco and Pilkington. Industry wide concern is that there is the potential of more jobs going offshore. The FAPM recently estimated that up to 10% of the direct workforce (27,000) has been lost nationally (approximately 1500 in Victoria), with possibly three to six times more, lost indirectly as a result of the multiplier or “knock-on effect”. The FAPM are currently surveying members to establish the exact extent of the damage.

¹⁹ “From The FAPM Executive” editorial in the June issue of the SAE-A journal, “Auto Engineer”.

There is no doubt that MVPs offshore sourcing has resulted in increasing (some say extreme) pressure on Australian Tier 1 & 2 suppliers. The health and independence of a significant number of local ACPs is necessary for critical mass. However, unlike North America, for example where there are a larger number of MVPs and more volume etc, here there are no alternatives other than the four existing MVPs – as a result of this vulnerability, many suppliers are diversifying away from automotive. This is not sustainable - there needs to be a significant level of local content, otherwise the volume will not be sufficient to maintain a supply base. The closer to CKD, the less viable the Industry!

A healthy domestic manufacturing industry needs both healthy MVPs and ACPs. The interdependence between the MVPs and ACPs was noted in the recent autoPOLIS report: - *“Just as ACPs need to be more pro-active in anticipating and serving the needs of their MVP customers, so MVPs need to be more engaged with their local ACP community and in helping them adapt”*.²⁰

The question was raised in relation to global sourcing as to whether it is possible that business could be done in a different way, so as to still meet both MVP and supplier needs. There doesn't seem to be an obvious answer, but whatever it is, an industry plan needs both the MVPs and ACPs working together in a cooperative fashion.

The supply base also needs all four MVPs and their current domestic and export volumes. The test for Australia is 2006 with the changing model mix, and the flow on effect with the change in critical mass. There will be knock on effects if any of the MVPs go – a decision from Detroit or Japan could also change the industry overnight.

While this is occurring the competition continues to increase. China's capacity will shortly outstrip their domestic demand, with multi-nationals currently spending a combined \$13 billion to triple the capacity to six million cars annually by the end of the decade. The expectation is that China will be shipping cars to Australia before the FTA is in place.

In considering the future, it is important to realise that the Industry is dynamic and there is continual change in strategy and operations - while there are four MVPs currently in Australia, they could go at any point and may possibly not even be the ones here in the years to come. As such, while we need to understand what it takes to keep the MVPs here, it is just as important to work to get the ACPs onto the global stage. A key to success for the industry will be healthy, competitive, independent, innovative suppliers. Supplier development is critical to the long-term health of the Australian automotive industry.

Supplier Development Approaches

There are huge disparities in the nature and quality of manufacturer - supplier relationships. The approach of the US MVPs versus the more corporate citizenship approach of Toyota has been noted²¹:– while Toyota has been able to meet its business investment needs, it is increasing its profile in terms of its social contribution.

From AISAG interviews many respondents, particularly those linked with Toyota, consider Toyota has the winning model and the preferred approach to supplier development. Toyota is not just survival orientated but growth focused, locally and globally. Further, that Toyota's strategy is very relevant to where the Australian Industry is at present. It would also appear that the Industry globally is moving to adjust to Toyota's perspective/model as a result of the competitive pressure.

²⁰ autoPOLIS report: *A Vision for the Australian Automotive Industry* – Prepared for the Federation of Automotive Product manufacturers – April 2005

²¹ autoPOLIS report: *A Vision for the Australian Automotive Industry* – Prepared for the Federation of Automotive Product manufacturers – April 2005

Those suppliers working with Toyota believe they have a good chance of success in the global marketplace because of Toyota's input. Toyota have approximately 100 suppliers in Australia – yet only about 50 would be common with other MVPs. The question was raised as to which suppliers aren't getting the benefit of being aligned with Toyota. However, the reality is, while Toyota may be looking for new suppliers, the Keiretsu arrangement may make it difficult for new suppliers to benefit.

Toyota has a genuine belief that to be a global company they must have regional manufacturing – USA, Japan, ASIA / Oceania, and emerging nations such as Russia and China. One car won't do all. They want to develop local suppliers to maintain local manufacturing.

To date Toyota has focused on improving supplier competitiveness (cost, quality, delivery) through lean manufacturing and process control. Recently Toyota has started to focus efforts on helping suppliers add innovation capability. Toyota product innovation is done centrally at their R&D centre in Japan however they want to have suppliers capable of working with them. Toyota is encouraging Australian suppliers to partner with Japanese suppliers (Keiretsu) where possible; or with integrated global suppliers where not.

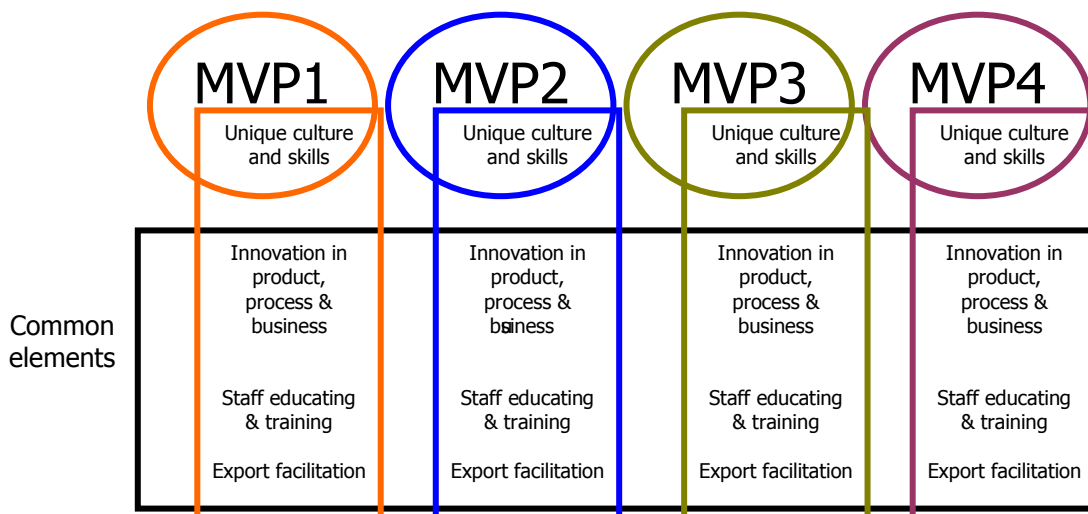
The Toyota Keiretsu partners are integrated into Toyota R&D at all levels – the global suppliers are also integrated but to a lesser depth. Toyota believes it leads global suppliers in terms of technology development, while Australian suppliers are miles behind – the gap is widening and the number of suppliers in Australia is dwindling!

The capability to innovate is also recognised by GM Holden, with its Holden Innovation department focused on leading its own internal innovation activity, and developing state of the art tools with other AutoCRC partners for use by its suppliers. The realisation is that unless suppliers can use the same tools as the MVPs they will be left behind.

Follow the leader?

It is recognised that all the MVPs (Toyota/GM/Ford/MMAL) are competing at a global level. Each is undertaking their own supplier development programs as they see fit. For example elements of the Toyota Production System are everywhere – GM now has GMS (Global Manufacturing System), Ford has FPS (Ford Production System) while Bosch has BPS (Bosch production System). So while each MVP may have their specific cultural overlay, it would appear that there will be common elements that could be leveraged to develop supplier capability.

Figure 12 – Supplier Development Model



It was noted that it may be possible to determine the elements that make up a healthy supplier scorecard, possibly by using these elements to support suppliers in an integrated, coordinated way across industry - a basis of initiatives for supplier development.

However, based on the recognised success of the Toyota approach, it was also thought that it would be of value to align any supplier development activity around what Toyota is doing.

Two key elements of Toyota's strategy are:

- Increasing supplier competitiveness through lean manufacturing and process control (cost, quality, delivery) and developing capability in technology innovation
- Increasing overall Industry workforce skill through education and training

Much of the industry is focused on the implementation of TS 16949 Quality Standard. The prevalent view is that implementing this standard is sufficient to ensure supplier health. However Supplier Development initiatives need to go beyond this; for example, we need to identify how we can help suppliers develop their capabilities and exploit opportunities in the global marketplace – both individually and collaboratively. Collaboration could include a consortia approach such as is being used by the Tooling Industry Forum of Australia (TIFA) for the Aerospace industry. Many suppliers need help to think and act strategically, in order to address both the current and future issues – support could be provided in a coordinated manner Industry wide to help suppliers develop this capability.

While many suppliers are struggling it was noted that there are a number that have been relatively successful in making the necessary changes, despite dealing with the realities of global sourcing. They have managed to perform well both at an operational level and strategically, having developed the capability to plan and make ongoing changes to their business.

The comment was made that Austrade is helping those companies prepared to look at export – some report exceptional results when working with Austrade people on the ground in China.

autoPOLIS Report²²

Since the initial interviews were conducted in relation to ACE, the FAPM have released the report prepared for them by John Wormald of autoPOLIS, author of the book 'Time for a Model Change'. The book captured the issues of the industry globally but didn't address Australia. The FAPM report was undertaken to review the unique Australian situation.

The indication from Industry is that the autoPOLIS report captures the reality and issues of the Australian automotive industry in a very comprehensive manner, despite what autoPOLIS consider a 'limited analysis'.

A key finding is the fact that the industry needs to go through another major transition if it is to survive, moving from the 'post-Button autonomy to functional networked-in status'.

While the report considers the MVPs in Australia are making the transition it notes that the ACP sector needs to make the same transition with substantial structural adaptations, and that much of the ACP sector will have to undergo significant changes in both capabilities and attitudes.

²² *autoPOLIS report: A Vision for the Australian Automotive Industry – Prepared for the Federation of Automotive Product manufacturers – April 2005*

In its report, autoPOLIS identified the following, needed for the ACP sector:

- Strategic market analysis, customer relationships management, and sales management;
- A much greater knowledge and understanding of actual costs and other business KPI's;
- The ability to access the results of research, even when it is not conducted at home;
- Applications engineering capability, to deploy in support of the local MVPs product dev't;
- Fast, flexible engineering, prototyping, etc - still more cost-effective than that available in the emerging markets or in the large mature ones;
- The ability to choose sub-suppliers and to structure a complete supply chain, based on a thorough understanding of all costs of the business;
- And - once again - a "can do/will do" attitude, outward- and not inward looking;
- Project management and communication.

While the MVP-ACP relationships are in need of considerable improvement, the bottom line is that all parties must help to move the Industry forward.

Recommended Stakeholder Actions

- *Utilise the findings of the autoPOLIS Report in the formulation of a plan for supplier development.*
- *Determine the value of 'independent' consulting support for suppliers on situational analysis and scenario planning, to help suppliers think and act strategically on current and future issues.*
- *Identify activity to increase supplier profile on the global stage - review the potential to use the Tooling Industry Forum of Australia (TIFA) consortia model used by the Aerospace industry for collaboration, as well as other potential sources of support.*
- *Encourage supplier "self initiated rationalisation and / or partnerships" within the industry to maximise the efficiency of installed capacities and capabilities.*

People Education & Training

Background

Post compulsory secondary education follows two streams – university study and accreditation through the Higher Education sector, and vocational education and training (VET) through TAFE colleges and a number of private providers – Registered Training Organisations (RTOs).

Academic programs through universities cover generic professional skill development and increasingly flexible curricula to respond to the specific needs of industry. Traditionally, universities have a strong focus on research – pure and applied. The Australian Technology Network comprising of 5 universities has a common focus on the practical application of tertiary studies and research with a strong, but not exclusive, relationship with the automotive industry.

The VET sector is supported by a range of industry specific organisations, in addition to the publicly funded TAFE system. Industry specific organizations include the following:

Automotive Training Australia (ATA) - the national Training Advisory Body representing all sectors of the industry. Its role has been to:

- Advise government on the training needs of the automotive industry nationally
- Develop nationally consistent training to meet those needs
- Market the benefits of training across the industry
- Provide advice and assistance to business enterprises

While FCAI continues to support ATA (till 30 Dec 2005), the FAPM has moved its support to Manufacturing Skills Australia. The Federal Government recognises automotive advice from the new Manufacturing Skills Council.

Manufacturing Skills Australia (MSA)²³ - The national Manufacturing Industry Skills Council is part of a network of 10 industry-based councils – it is the voice of over 75,000 businesses employing almost one million Australians, and co-ordinates research on manufacturing skills needs through a range of Government activities, programs and strategies. The role of the Council is to assist industries, enterprises, and their workforces to integrate skill development with business goals and to support high quality, nationally recognised training products and services.

The Council has established four Industry Advisory Committees (IACs):

- Metals/Engineering and Aerospace Industry Advisory Committee
- Process Manufacturing Industry Advisory Committee
- Textile, Clothing and Footwear and Furnishing Industry Advisory Committee
- Strategic Manufacturing Initiatives Industry Advisory Committee.

While there isn't a sector specifically for automotive, the industry has provided input into the Competitive Manufacturing Training Package – this was developed nationally under the auspices of the now defunct Australian National Training Authority (ANTA).

The Competitive Manufacturing Initiative (CMI)²⁴ is a collaborative response from Australia's Manufacturing Industry Training Advisory Bodies (ITABs) to assist the manufacturing industry's performance through innovative vocational education and training to employees.

²³ <http://www.mskills.com.au/>

²⁴ <http://www.cmi.org.au/network/index.cfm?L=100000&CFID=36302&CFTOKEN=32505090>

CMI aims to make available, training in the skills needed for modern manufacturing practices and principles, accessible to all Australian manufacturing enterprises, through nationally accredited qualifications.

Automotive Training Victoria (ATV)²⁵ –The Victorian Automotive Industry Training Board Incorporated, trading as Automotive Training Victoria, is a non-profit organisation representing the automotive industry, and allied industries.

ATV is the peak advisory body on all matters of training, with statutory recognition under the Vocational Education & Training Act, and is charged to prepare quality industry reports identifying the type of vocational training, training demand and employment trends throughout Melbourne metropolitan and regional Victoria areas.

ATV comprises senior industry representation from across the key automotive manufacturing and retail sectors including:

- Victorian Automobile Chamber of Commerce (VACC)
- Passenger Motor Vehicle Manufacturing
- Component Manufacturing
- TAFE
- Australian Manufacturing Workers Union

The Board is supported by training councils covering Repair, Services & Retail, Heavy Vehicle and Manufacturing.

Industry Comments

People skills & capability in ‘state of the art’ tools are required to support the niche strategy and associated initiatives. There is recognition of the need to get improved automotive education in place before China’s industry matures – also before the next waves of Thailand, India, Vietnam etc.

Education and training is an underpinning infrastructure requirement for the automotive industry. The assumption has been that education providers have known what Industry needs, and have had mechanisms in place that actively engage and feed data into programs. This may have been true in some instances, but there is one thing all agree on, that is that education and training needs to be Industry driven (demand side) and customer focused. More than ever before Industry must have the ability to lead the response, and not simply respond to what is offered by education and training providers. Agreement is needed across industry, particularly with input from MVPs, on the content and delivery of programs.

If the thrust is the survival and building of the Industry, to counter the demise of manufacturing, then there is a need to determine;

- What’s skills are needed?
- What’s happening in competitive nations that result in them building cars faster, cheaper and better quality?
- What is worlds best practice?
- How to get Industry input to curriculum?

²⁵ <http://www.atv.org.au/>

Industry education facilitators/providers need to work with the MVPs and identified visionaries to identify the skills needed to give industry a competitive advantage in future – it is thought that few Universities or suppliers can define this.

Timing is important – we need a plan to start a revised automotive education program rollout in 2006, based on a 4 yr program – this also assumes an integrated strategic plan with everything else is in place or the concept is flawed. It was also thought, there was a need to firstly identify a Victorian solution, then if successful take it National – possibly develop a Pilot Program.

Industry considers training is the key to the future and are willing to invest – the issue is integration, execution and sustainability. In general it was considered that automotive training is uncoordinated and/or under resourced without an obvious solution to improve, given the current situation.

Component manufacturers, in general, admitted that while they thought there was a shortage of skilled people, they were able to get the right engineers when required. What there was general agreement on was that there was a definite need at trade and paraprofessional level.

Opinion varied as to whether a specific undergraduate automotive degree is needed. Many thought that the current need is for post graduate and management level training.

Engineering undergraduate degrees

Engineering training is generally considered acceptable. Toyota believes the quality of graduates is good, with the Mechatronics courses (eg Swinburne) well regarded. TMCA aims to take the brightest graduates then skill them further, with specific Toyota skills and culture post engagement.

A recent workshop²⁶, with Holden, Ford and Toyota as well as a number of component suppliers, was held to gauge the future needs of Industry, and to gain their participation in the structuring of a degree program.

It was found that what Industry wanted was:

1. Generic problem solving skills (e.g. English skills in comprehension and communication, entrepreneurship, innovation, leadership, general management, report writing, presentations and project management including FMEA and HAZOPS).
2. Specific discipline skills (e.g. strong mechanical knowledge via design, statistics, dynamics, fluids and some thermodynamics; technology literacy via exposure to software packages covering CAD, CFD, and FEA; materials; design of experiment etc.).
3. Exposure of students to industrial practice via industry based learning programs was also seen as a high priority, although it was acknowledged that many companies would prefer honours students rather than pass students.

Note – while there was some disagreement by the industry participants on the value of some subjects like thermodynamics (specialist) and OH&S (fringe), in general there was close agreement on what graduates should be exposed to and gain from an engineering degree. From discussions it would appear industry is interested in generic technical and management skill-sets– then after a few years experience, they want some post grad development (internal and external training).

A mechanical degree with manufacturing content was also considered desirable whereas a specific manufacturing degree was not.

²⁶ Workshop on Future Directions for Engineering Programs in Mechanical and Manufacturing - Deakin University (16th of December, 2004)

Holden specifically wants graduates to have familiarity with automotive tools – eg, virtual design, engineering and project management.

Management level training,

Both TMCA and Holden use the Melbourne Business School in Mount Eliza.

While interest was expressed by many for the need to supplement local providers with specialist automotive training from international institutions, such as Kettering University, the position was not unanimous.

Toyota's focus is generic lean manufacturing at various levels in various guises. TMCA conduct training in lean manufacturing practices up to middle management level, and have lower to middle management seconded into suppliers (joint payment). TMCA believes that the lean philosophy has expanded application throughout Industry. There are lean manufacturing organisations / consultants - these could be located at ACE.

Shopfloor supervision

TMCA expressed that there is a need for Process Engineering/Management courses (diploma or advanced diploma level) targeted at supervision with application in an automotive environment!

General focus on the 'soft' skills, as critical to supervisory development, requires specialist assistance from a range of fee for service organisations.

TMCA uses Frontline Management²⁷ for their supervision development programs.

Trade level

The comment was made that *"TAFE graduates / trades people are the SME owners of tomorrow!"*

The key response at trade level is the Competitive Manufacturing Initiative (CMI)²⁸ provided through TAFE. The CMI targets the skills and knowledge to achieve:

- Agile Manufacturing
- Total Productive Maintenance / Reliability Centred Maintenance
- Six sigma quality control techniques
- SCADA/ERP systems
- Supply chain/value chain management
- Supporting skills such as teamwork and communication

The content of Competitive Manufacturing, based on lean manufacturing encompassing TPS (Toyota Production System), is considered excellent. However there is an issue for stakeholders, in that the curriculum is such that it is difficult for the average TAFE to deliver – although the capability does exist inside the MVPs themselves.

The generic component of Competitive Manufacturing is good for all industry and could be incorporated into the ACE activity, even as a 'degree top up'.

Universities

The question was raised by a number of respondents as to whether Universities are adding value to Industry – many considered Universities an under utilised resource, and not focused on supporting the strategic needs of industry.

²⁷ <http://www.managementcdo.com/>

²⁸ <http://www.cmi.org.au>

In the past the reality has been that the demands of Industry (cost & timing) have been in conflict with the Universities research needs (eg. the need to teach large numbers of students and generate papers for publication). However given the changing environments, in both Higher Education and Industry, there is great potential for increased integration in education, research and research based learning.

There is clearly an opportunity for Universities to work together to bring critical mass and complementary skills to bear on the issues of the automotive industry and manufacturing. Many respondents consider there to be a need for a strategic plan, to ensure university support of the manufacturing industry, and a change in policy to promote a shift back to manufacturing.

It was also noted that Industry needs to be more aware of the capabilities that exist with the universities, and should be working closely with universities to guide future direction in education and training support.

New Opportunities

New opportunities for automotive education and training exist with the AutoCRC and at ACE.

The AutoCRC will be a key influence in increasing integrated activity, encouraging multi-institution project involvement and facilitating Industry/institution placements. Its vision is for training students (& educators), working in teams on Industry projects, working at a central location (learning labs), resulting in hundreds of engineers gaining relevant experience/skills.

The key is gaining access to new virtual tools being developed in the AutoCRC – these will be the enablers for the industry, and are in development and progressing rapidly. It was noted that VROOM needs to be integrated and utilised commercially.

Currently the AutoCRC consists of 21 organisations (including two State Governments) but aims to add SMEs, including computer and software companies, to the project teams. They have an opportunity to add major funding from PACE (Partners for the Advancement of Collaborative Engineering Education)²⁹. PACE is a partnership between GM, EDS, Sun Microsystems and UGS PLM Solutions, that supports strategically selected academic institutions worldwide. Assisted by many companies (Altair Engineering, AutoWeb Communications, Fluent, Hewlett Packard, LSTC, MSC.Software), PACE provides hardware, software, training, and automotive parts to PACE Institutions. Monash University is a network member.

Also key in improving automotive education and training is ACE. The AutoCRC sees a link to ACE as important - ACE can be a hub and promotional centre to provide further collaboration opportunity.

What needs to be determined is what should be undertaken in ACE. Suggestions from Industry included:

- KBIT articulation
- Summer programs
- AutoCRC learning labs
- Automotive higher education courses
- Shared infrastructure

²⁹ <http://www.pacepartners.org/>

While Kangan Batman Institute of TAFE provides the foundation of ACE, it is Stage 3 and the opportunity to add the AutoCRC and Universities for higher education, that that will provide an integrated approach to resourcing the industry.

ACE – Possible Higher Education Provider(s)

A number of potential providers of Higher Education have been identified to complement KBIT at ACE. KBIT has had general discussions with both Deakin and RMIT, and believes they can work together to identify automotive career pathways from Trade to PhD.

Both universities are AutoCRC members. Key AutoCRC education activities & programs have been identified – the aim is to leverage the learnings within the AutoCRC by involving a wide range of participants.

Discussion has also occurred on adding the expertise of an international, automotive oriented institution such as Kettering University.

Deakin University

Deakin University has provided a Manufacturing Engineering degree since 1992. However, with a dropping demand for Manufacturing Engineering they have recently added a Mechanical Engineering degree with an emphasis on modern tools for automotive product development. This involved broad industry consultation, and the focus for the new degree is on advanced CAE tools, combined with understanding of new materials, combined with a strong management stream.

The degree will be delivered in both on and off-campus modes, which offers the possibility for the industry to upskill current staff. There is also an exit point after 3 yrs (BTech), which may suit some industry staff. The BTech pathways program has been successfully delivered to Ford since about 1995 and in 2003 Deakin commenced delivery to employees from Holden and Bosch.

In the second half of 2005 a new Masters program in Mechanical Engineering (Automotive Product Development) was launched, with an initial intake of 20 students. This is a 2 year course aimed primarily at the international student market, and it is likely that a shorter variant will also be offered in the near future.

RMIT University

RMIT is currently putting together a new strategic plan which will include automotive education with a focus on high end intellectual capacity in:

- Design / Engineering,
- IP generation to drive industry,
- Project Management.

Currently RMIT is the only University offering a specific undergraduate automotive engineering degree – this is overseen by an Industry Advisory Board and is accredited by the Institute of Engineers, Australia.

They have had one graduate cohort (20) with a high success rate of employment. Work experience has been with European MVPs (Audi & VW) – funded by sponsored internships, with a Euro Union incentive of up to 1 year.

RMIT is proposing an “Industry Specialisation” MBA Program, delivered in collaboration with Kettering University, to provide targeted and relevant Management expertise, with local and international input, to support the future needs of the industry.

Kettering University

Kettering University (located in Flint, Michigan, USA) has historically focused on the automotive industry but is increasing its support of the manufacturing industry in general. Curricula with components of virtual design, virtual engineering, agile manufacturing, computational engineering, “fast to market” and CAE etc, would appear to address many of the industry needs identified in this report.

RMIT has recently signed a Memorandum of Understanding (MOU) with Kettering, and the two universities have committed to explore collaboration in teaching and learning, and in research, with a focus on the possibility of using on-line Kettering courses as electives to support the core content of the RMIT Industry Specialisation MBA Program - MBA (Manufacturing Management). The proposed Kettering electives would include “lean manufacturing” courses and will be available online in late 2005.

Note – Deakin University has also indicated its interest in collaboration with Kettering, building on their expertise in delivering on-line learning.

Working Group Output

As a result of a series of discussions, a range of action items / recommendations was developed, namely:

Pathways/Linkages (“Articulation”)

There is a need for clear pathways and linkages for automotive education.

Action: Continue development of pathways from Diploma of Automotive Technology (Kangan Batman Institute of TAFE) to undergraduate Engineering degrees including B Eng (Auto) - identify programs for collaboration by education providers.

VET

There is a need for undergraduate engineering students to obtain hands on exposure to manufacturing processes and operating systems. The opportunity for an expanded VET provision of such exposure will be explored under the guidance of ACE.

Action: Identify opportunities for an expanded VET – an integrated plan

B Eng. – Automotive

The RMIT Automotive Degree is considered well placed – there is opportunity to add expertise / course content in Mechanical, Manufacturing, Mechatronics, Robotics and Electronics from other providers including Deakin, UniSA and Latrobe - there is also a need to ensure that the course meets the needs of Industry, on a long term basis, through on-going cooperation with, and oversight by Industry.

Action: Support exchange of expertise/course content between RMIT, Deakin, UniSA and Latrobe.

Masters Courses

There is divided opinion as to the attraction of post graduate offerings to the automotive industry, however, Masters courses are under development at RMIT (International Automotive Engineering) and Deakin (Automotive Product Development) – there is opportunity for collaboration with other universities through the AutoCRC.

Possible automotive specialisation areas (suggested) – Virtual Design, Product Design Process, Value Chain, Project Management, Lean Mfg, Process Control and Change Management including scenario planning.

AISAG supports continuation of collaborative module sharing between Institutions, and recognises the need to overcome cost imposts on domestic students by provision of appropriate incentives.

Action: Continue Masters course development at RMIT (International Automotive Engineering) and Deakin (Automotive Product Development) and relevant learning modules in collaboration with other Institutions.

AutoCRC

The Automotive CRC has a strategy to engage undergraduate and graduate students, and their instructors, in projects aimed at developing skills for the next generation engineers. This process may well be expanded to involve trade and Para professional skills from the VET sector. This action is fully supported by AISAG and it is noted that potential exists for such project activity to be centred on the ACE facility.

The Automotive CRC is currently identifying education bodies that should be subject to collaborative involvement with research and skills development projects. ACE interfaces will be identified during this process. There is also an interest in implementing an Automotive Cadetship.

Action:

- *Expand the AutoCRC through involvement of trade and Para professional skills from the VET sector.*
- *Identify education bodies for collaborative research and skills development projects. In conjunction with the Auto CRC, develop and test an Automotive Cadetship covering an extended cooperative education model.*
- *Initiate a pilot program with selected industry participants.*

VPAC

VPAC provides upper level computational infrastructure, and represents all Victorian Universities – the upper end activity for Masters could flow down to lower levels.

Also, VPAC's initiative relating to an Automotive, Aero-space, and Rail Design Centre, and it's capability to provide visualization training relating to plant operations, makes this organisation an ideal potential co-located partner at ACE.

AISAG supports development of a business plan and MOU between Kangan Batman Institute of TAFE and VPAC.

RS&R - VACC Tech Services Division

VACC is made up of small and medium businesses in the retail automotive industry across metropolitan and regional Victoria. Its members employ nearly fifty thousand Victorians and provide key services in the repair, services and retail sectors of the automotive industry.

There is a strong argument to support collocation of the VACC Technical Division with ACE.

Action: Raise discussion with the VACC about collocation at ACE and vocational development needs.

National and International Linkages

AISAG discussion has identified the need for focus on broad enterprise excellence regarding automotive leadership and innovation, centred on product, process and the business model. RMIT and Kettering Universities have identified teaching materials of relevance, and program evaluation is in progress.

Possible focus areas (suggested) - Management/cultural change , awareness, structure of organisations, delegation, values, changing attitudes to work, internationalism, IR Leadership, logistics, materials, communications, environmental & recyclability and supply chain.

Action: Review the relevance & opportunity to add other elements for specific undergraduate degrees and/or postgraduate and management training, through collaboration with leading national and international institutions.

ACIS

In addressing the issue of cost, related to education and training, in support of the automotive industry, it was observed that reconsideration of requirements under the ACIS program may permit some leverage in this area.

Recommended Stakeholder Actions

- *Reinforce the interface between Industry and education / training providers through the ACE - appoint an education leader on the ACE Board of Management to drive initiatives.*
- *Define pathways/linkages for an integrated automotive education program from Diploma to undergraduate Engineering degree including B Eng (Auto) – identify programs for collaboration by education providers.*
- *Continue focus on providing education and training that meets industry's needs - review the opportunity for multi-institution education provider collaboration and for integrated programs at all levels.*
- *Undertake specific actions identified by the Working Group including:*
 - *Vocational education training - identify opportunities for an expanded VET – an integrated plan.*
 - *B Eng. (Auto) - support exchange of expertise/course content between RMIT, Deakin, UniS and Latrobe.*
 - *Masters courses - continue Masters course development at RMIT (International Automotive Engineering) and Deakin (Automotive Product Development) and relevant learning modules in collaboration with other Institutions.*
 - *AutoCRC – identify education bodies for collaborative research and skills development projects - review potential expansion through involvement of trade and Para professional skills from the VET sector.*
 - *Develop and test an Automotive Cadetship covering an extended cooperative education model. Initiate a pilot program with selected industry participants.*
 - *VPAC – support development of a business plan and MOU between KBIT and VPAC for collocation at ACE.*
 - *VACC - support collocation of the VACC Technical Division with ACE.*
 - *National & international linkages – identify opportunities to add broad enterprise and excellence regarding automotive leadership and innovation centred on product, process and the business model – include Kettering University.*

Further change is inevitable

The changes brought about by the Button Plan saved the Australian automotive industry from all too likely extinction. Its success held as long as the world automotive industry remained mainly regionally structured and centred on the traditional Triad markets. The pursuit of a new local-global balance by world MVPs and ACPs alike, coupled with the final emergence of China and other new markets has disrupted that equilibrium. The Australian MVPs are individually adapting to that new dispensation. So must Australia's ACPs. Each must pro-actively redefine its role and strategy, broadening its customer and supply bases as appropriate, in order to ensure its survival.

It can be done but there is not much time

A Networked-In positioning should be possible for Australia. The world automotive industry's journey towards globalisation is far from over. Structures are far from fully defined or finalised. A Networked-In position is not some kind of immovable monolith, it is not about trying to preserve a complete national industry, against all comers. It is the sum of individual strategies and adaptations. There is no notion of overall critical mass although there are some critical functions which need to stay on-shore.

autoPOLIS report for the FAPM - April 2005³⁰

Positioning

Industry Comments

The theme of 'Positioning' captures the key thoughts and is the starting place for all, ensuing activity for Industry transformation – it needs to address the goal of maintaining a viable automotive manufacturing industry in Australia.

The realities of the changing industry are starting to make their way into the public press.

"The industry is arguably undergoing a level of upheaval not seen since the Button Plan of the mid-1980s, which transformed the industry by cutting numbers of locally produced models and reducing tariffs for a leaner and more competitive industry.

The Australian car market is in a state of flux, with component makers increasingly nervous about the future as the four local car makers increasingly source cheaper products from overseas.

There is a growing perception that more industry jobs are in danger as the car makers - driven by their need to curb costs or become uncompetitive - increasingly expect the local component makers to live by the same harsh economic realities.

This year there has already been a string of companies hurt by the new "cheapest source" policy. Among them are Autoliv, Calsonic, Trico, Pilkington, Cooper Standard, Air International, VOA Webco and PBR. Thousands of jobs have already been lost and many more are on the line.

As part of the global economy, car makers and component manufacturers have a big battle ahead of them. Exposed to competition as never before, they all need the markets to which they supply their goods to remain buoyant. Uncertainty is proving to be a permanent feature of the local industry".³¹

Australia now competes on the global stage. Quality, cost and product delivery must be at world standards if we are to continue to preserve the vital domestic market base, to attract

³⁰ autoPOLIS report: *A Vision for the Australian Automotive Industry* – Prepared for the Federation of Automotive Product manufacturers – April 2005

³¹ Booming sales, but unsettling times – Telstra ebusiness automotive 18July05

manufacturing investment by multinational parents and affiliated companies, and to grow export markets.

Australian products no longer have an opportunity to lag behind world technological benchmarks - increasingly in order to reduce costs, they must create new world benchmarks in their own special fields.

The recognition that that many direct jobs are going, as MVP global sourcing reduces local content and drives manufacturing offshore, is the first step in the transition to a new future. In making the necessary changes there is an understanding that Australian companies are unlikely to survive as low cost producers.

However what isn't necessarily understood or agreed is what our sustainable competitive advantages are. Once this is defined it can then be used to drive the strategies in the appropriate areas eg the pursuit of cutting edge innovation and leadership in technology.

We need to identify where we can play a role in the global market place. This includes how the Australian automotive industry positions itself in a world where the key players are no longer just North America, Japan/Korea and Western Europe, but now include China, and in due course others (Thailand and perhaps eventually India).

One thing that does appear to be understood is the need to move from a 'domestic' view and to embrace the new future as a player in the global marketplace. While many view this as a daunting task, as recently noted³² Australia is one of a small number of countries that has the capacity to produce passenger motor vehicles from concept to showroom.

The Australian automotive industry does have a very real capability – we have experience and capability in building cars - our strengths include our people, skills and stability - this is something we can build off.

In addition some of the opportunities noted that Australia can use to its advantage include:

- FTAs,
- Proximity to Asia / Timezone,
- English speaking based.

Together these can be used to formulate a specific answer - a niche business strategy, tailored in particular to face the threat and take advantage of the opportunity of the growing market in Asia.

There is work for the whole industry to do. If the Industry does work together, and focuses its energy on key initiatives, it should be possible to make the necessary transition. It is important that we keep a positive attitude at this time - we can do it and the industry can have a good future!

Possible Business Model

The emerging Australian role as a centre of excellence in design, engineering and project management (and other soft skills such as marketing) are relevant to the Asia-Pacific region (as reflected already by the performance of the local MVPs in their regional roles) and should be noted and included in any "vision". Australia's 'can do attitude' – also technical competence, flexibility, adaptability – are recognized globally.

³² "From The FAPM Executive" editorial in the June issue of the SAE-A journal, "Auto Engineer".

Many believe the differentiators / competitive advantage for the Australian automotive industry is its capability in innovation, design and engineering capability, and its manufacturing excellence.

The suggestion of an appropriate model to take up is as follows:

- *Australia becomes a centre of innovation, design and engineering & project management – for both domestic and global products.*
- *Australian companies retain the intellectual property (IP) while manufacturing can be done anywhere eg China, Korea, Taiwan etc.*

To support this, there needs to be networks for local companies to those that are already global - Australian companies are well positioned to support multinational activity, particularly in Asia – this would help protect against consolidation.

The example of NTS Tooling Solutions was cited. NTS is a tooling company which has a business model that is proving to be very successful for it as a small Australian company in the global automotive marketplace. Whether in tool design or manufacture, engineering or project management, the company is leveraging on the experience and skills of its people. It has successfully managed to link to major customers in places like Detroit, and has set up field offices in places like Korea & China. Key is the retention of all ‘smarts’ in Australia and FTA’s and networks to move tooling around in a cost effective manner. NTS didn’t wait for an answer, but rather got out to see where their future opportunities could be made.

However, if in response to global change, such as the industrialisation of China, and as a result of MVP global sourcing, there are less local suppliers, less diversification and ultimately fewer jobs, then there will be a couple of potential issues to be comprehended and worked through in the strategy.

Firstly, what local suppliers need do to identify new opportunities and develop themselves, individually and corporately, to the point where they are considered preferentially by MVPs globally – this issue needs to be addressed under the supplier development initiative.

Secondly, if there are going to be fewer jobs, what needs to be done to help the transition for the existing workforce – this issue needs to be addressed under the policy initiative.

Interdependence

In defining any positioning strategy/niche model there are some important things to note. Firstly, that a sustainable automotive industry requires a healthy domestic market with complementary exports - it is essential the industry retains a significant share of the home market, to maintain sufficient volume for ongoing product development. We can’t expect to have a healthy domestic industry without a reasonable export volume, and we can’t export without a healthy domestic industry. The thought that Australian industry can survive either on domestic volume alone, or just as an exporter, is considered erroneous.

While the local MVPs are moving offshore with sourcing to reduce costs, this is not sustainable - there needs to be significant levels of local content, otherwise the manufacturing volumes will not be sufficient to maintain a local supply base. The closer to CKD the less viable the industry.

A healthy industry rests in the first instance on the car manufacturers producing the right products for the Australian market and for export. It also depends on a continuation of the appropriate environment to make business cost competitive.

Secondly, while locally each MVP needs the other MVPs to support the local supply base with volume, the local MVPs are arms of multi-nationals – while some MVPs have stated that regional

manufacturing is part of their global business plan, it uncertain as to what the plans of the MVPs really are.

Thirdly, success requires both the MVPs and ACPs working together. To support them we need to understand what it will take for both MVPs and ACPs to compete successfully in the global marketplace.

Cars are now considered commodities, having flavours and unique styles - global investment will be in generic structures – then unique local or regional design approaches will be added on the interface (visual, tactile). Australia needs unique, pragmatic and innovative product solutions.

Working Group Output

Unique car platforms can survive on volumes of 180,000 p.a. [at a premium price].

The alternative is a global platform with a volume of 350,000 p.a. - this would require export volume of approx 300,000 - the model does not work.

In relation to the future of the local MVPs:

- Holden : OK while it remains a single unique platform
- MMAL : At risk
- Toyota : At risk
- Ford : OK

Car assembly in Australia is not a given.

System integration is the ‘value add’.

The biggest market will determine where the vehicle is assembled.

In terms of component producers, it was noted that they need to use the MVP’s vehicle integration capability to help them develop their export markets.

- niche [smaller global volumes/premium products]
- Export – 75% plus
- Add technology [by collaboration]

The opportunity is the “difference“ in the local cars.

There is need to move from low value to high value jobs in Australia.

In the future Australian Component Producers (ACPs):

- Cannot sell commodities
- Must differentiate their products
- Must align their technology and processes with the MVPS

Australian Component Producers of the future:

“IS”

- System integrator
- Agile/flexible/fast
- Exporter [75% +]
- High value/high tech
- Collaborator
- Product differentiator
- Aligned with MVP's

“IS NOT”

- Component Supplier
- High volume, long run
- Local supplier only
- Commodity producer
- Arms length supplier
- “Me Too” supplier
- Non aligned, not adding intellectual value

The New Engineer

To support the niche strategy, Australia will require people to undertake activity in a totally new way. The ‘new engineer’ will need skills focused on providing a competitive edge:

- Be globally astute...a new mindset
- Able to speak Chinese ...and/or Indian...etc
- Know how to protect IP... understand potential theft issues...
- Be application oriented
- Know how to use the new technology being developed

The potential cost? The high intellectual expertise will demand high remuneration at an operational level whilst specific education and training will be required to produce and shape the new skillset.

Recommended Stakeholder Actions

- *Identify the competitive advantages and differentiators for the Australian automotive industry.*
- *Understand where the global Industry is going and the opportunity for Australia.*
- *Develop a corresponding strategy to enhance the performance of the local Industry that recognises the impending change.*

Agile, fit and lean

Few industries capture the imagination of the ordinary person in the street as much as automotive. In just over a century, the car has turned from a luxury item to a necessity for masses in the developed world.

Factors such as intense competition, huge investment, passion for innovative design and a quest for efficiency are business realities for automobile manufacturers.

If there were just one word to epitomize the Automotive sector, it would be volatility. Simply put, survival depends on being agile, fit and lean.

Cap Gemini Ernst & Young

Product & Process Innovation

Industry Comments

Innovation is required to support the niche strategy and is the basis of Industry's competitive advantage.

Most believe that to be competitive, Industry needs to be fast, agile & flexible in all areas: design, manufacturing and business. Industry needs smarter processes and products. As such it needs to be working to add intellectual capability/value at every point/level.

Some of the changes noted in how component producers are moving towards innovation were:

- *Linkages with global partners to access IP.*
- *Entry of system integrators locally.*
- *A move to medium to high end IP eg modules/systems not components.*
- *An increasing focus on automation.*
- *A move to high quality, engineered products providing value (in support of the Toyota view - "rewarding with customer satisfaction").*

Yet Industry needs help with innovation. The automotive industry is not alone - the issues it faces are common to all manufacturing companies.

There is a need to up-skill the Australian manufacturing industry with 'fast to market' solutions, requiring less investment, and with flexible and agile manufacturing, to meet changing consumer demands.

Industry needs support and exposure to the innovation process – it needs to understand scenario planning and be able to make the necessary changes to keep ahead of the competition.

Many believe that a key part for the future success of the Industry is the AutoCRC. The AutoCRC, described in the earlier section, is a government funded catalyst to enable collaboration. Its focus is on:

- Innovative processes
- New technology
- Skill development

Much of its activity is focused on pre-competitive research aimed at getting products to the showroom in 5 to 12, months as opposed to 5 years, through the removal of physical prototypes

and the use of virtual certification. Note: it was offered by some that they believed Toyota have their own product development tools – also that it now takes Toyota less than 2.5 years for the total product development cycle.

What is required is to bring together key organisations in support of the niche business strategy, and in support of collaborative R&D activity in the AutoCRC, to better link industry to the wide range of existing capabilities available, and supporting the development of the industry whilst contributing to its knowledge base.

Interviews also highlighted a couple of extra points in relation to innovation.

Firstly, to increase innovation capability will require support of both R&D and education - Industry needs access to high quality design & engineering resources, and, well trained, educated and focused staff.

Secondly, there is a need for cost management – while Industry needs to innovate, it also needs to have the ability to make a profit and have enough money to continue ongoing investment into R&D.

The AutoCRC is central to the ACE proposal. It is essential that all MVPs are involved with the AutoCRC and ACE.

Working Group Output

Discussion has occurred as to what is being done by both MVPs and suppliers in terms of innovation.

There is agreement that there is activity which is both private and confidential in nature, driven by corporate / global agendas, however, it was also acknowledged there are subjects of common interest that are cross-business, cross-functional and cross-national which could be addressed for the collective benefit of the industry.

To date Holden and MMAL have been the only MVPs in the AutoCRC – mainly because the other MVPs have viewed the CRC as 'Holden centric' (due to Holden's leadership in setting it up) and also because they believed that AutoCRC is focused on product innovation. In fact the converse is true. The AutoCRC is focused principally on both process and business improvement and Holden has initiated the AutoCRC for the benefit of the whole Industry. The value in collaboration has been recognised by many organisations leading to twenty one (21) partners being involved in the AutoCRC, making it one of, if not the largest CRC.

There is agreement that the AutoCRC provides an opportunity to create a strategic advantage for the industry in both process and business system innovation, for example, looking at a coordinated approach to the supply chain in order to generate intellectual property in scanning and sequencing, to improve manufacturing performance.

There is also an understanding that the AutoCRC governance process has been set up to deal with IP issues appropriately, and that collaboration by all MVPs should be possible.

The first task is to identify what themes are of common interest, and would create a strategic advantage for the industry when scoped out as pre-competitive projects. Second, is to determine what the best means would be, by which these projects could be undertaken.

While it was thought that the AutoCRC could well be the best vehicle to support innovation, there is a realisation that other means may need to be sought. The CRC model is restrictive in the sense that while it creates collaboration, the addition of extra partners dilutes the funding leverage, and as such acts as a disincentive. The AutoCRC partners are also focused on delivering specific projects that have already been contracted with the Federal Government, and will need all of its resources to

deliver these. What would be required would be additional funding to accommodate the new members in the AutoCRC, or the need to collaborate outside the AutoCRC.

Note – in this light, the various sources of R&D funding and the basis of the allocation of funds towards strategic projects should be reviewed, in order to maximise the potential strategic advantage.

An additional point noted was that it is essential to keep the AutoCRC and VPAC together to optimise effectiveness. While the ACE Stage 3 proposal may go ahead, it is not likely to be finished before the AutoCRC and VPAC seek a new home. The cost to then relocate to ACE could be high and the reality of this scenario needs to be understood.

Recommended Stakeholder Actions

- *Relocate the AutoCRC, VPAC and supporting organisations to ACE.*
- *Determine projects of common interest in process and business system innovation to create a strategic advantage for industry.*
- *Identify existing R&D capabilities and gaps - identify the appropriate 'vehicles' for collaboration and collaborative R&D activity, including through the AutoCRC at ACE.*
- *Review the various sources of R&D funding, and the basis of the allocation of funds towards strategic projects in order to maximise the potential strategic advantage.*

Promotion & Communication

Industry Comments

There is a false view that the Industry is healthy based on promotion of sales of 1 million vehicles locally - the fact is that the majority are imported and that proportion continues to increase!

In addition, the proportion of local content in locally produced vehicles is decreasing with a corresponding increase in the number of overseas suppliers being used in future models.

The focus shouldn't be on the 1 million vehicles, but on the impact on the balance of payments from the import of 670,000 vehicles (approx), the reduction in Australian manufactured vehicles, and the impending job losses in the Industry.

There is a belief that perhaps the Federal Government's view is that everything necessary has been done for the Industry:

- There was an Auto Action Agenda (2002) – this is now completed and the resulting Policy is in place (2002),
- A \$4.2 billion ACIS package has been provided to support reduced tariffs – providing a decade of certainty,
- Industry alone can do it - free market forces will drive improvement,
- Economic Rationalism – if you exist you pay for it!

While the responsibility is clearly in Industry's court, and market forces will prevail – the reality is that the Australian automotive industry's ability hasn't decreased – the competition has increased, and the game has changed:

- Reduced tariffs
- Globalisation
- Cars are a fashion accessory/commodity
- One decision from Detroit or Japan could potentially close Australia's Industry down

There is a need for industry and government to cooperate more than they have in recent times – for productive dialogue, there is a need to define and promote the true situation by qualifying the reality of the “1 million sales” both inside and outside the Industry - metrics (data / statistics) are needed – as in any business, annual reviews of performance are necessary for adjustments to the business plan.

As mentioned previously, there is a need for a sufficiently large volume base to ensure ongoing MVP investment in future model development and for the health of the Industry.

In terms of critical mass for industry, some believe that Industry needs a volume base of around 350,000 units and two to three manufacturers to be viable. Others thought that the industry could survive without any local production volume, existing solely as an exporter, but this is considered erroneous.

Export is important, yet only a few suppliers are global – the others need the local industry.

Australian MVPs (Holden and Ford) are not deemed to be 'international competitors' – their export numbers are comparatively low (eg Holden exports are around 20%) and would need to increase to be say 30 to 50% before they could be considered a global exporter. As such they are really domestic producers that have had the opportunity of some export volume to provide extra revenue.

Economic modelling to indicate trends etc may also be needed for any meaningful debate, eg:

- How much of a domestic Industry is required to support export?
- What is critical mass in volume and % of local content to maintain Industry?

The sensitive nature of this issue is noted, along with the tension of getting people to understand the urgency of the issues, without causing a 'crisis mode' reaction and panic attack to the detriment of Industry itself – care is required to craft a promotional strategy including media interaction that allows the issues to reach public consciousness and form a public agenda.

Recommended Stakeholder Actions

- *Define the true situation to allow dialogue with Government – requires real metrics.*
- *Undertake economic modelling for scenario planning on key issues- eg what is critical mass in terms of volumes and percentage (%) of local content to maintain Industry?*
- *Review AISAG report with FAPM, FCAI, DIIRD, State and Federal Governments*
- *Develop a press release including output from AISAG activity*
- *Identify Industry and Government press officers and key (sympathetic) journalists for coordinated rollout*

A bipartisan Federal Government policy approach has steadily increased the industry's international exposure through tariff reductions, while providing targeted support through schemes such as ACIS. This policy has been pursued by successive Federal Governments since 1983, and has resulted in steadily increasing exposure to global pressures for our whole industry.

This policy seems unlikely to change in the foreseeable future, no matter which party is in Government in Canberra. This means suppliers have to accept that many of the challenges we face are unlikely to be "fixed" locally, by or within Australia alone, now or in the likely future.

FAPM Executive - June 2005³³

Policy

Background

The automotive industry is one of the most sophisticated and competitive manufacturing industries in the world, driving considerable complexity, efficiency and economic activity in the communities in which it operates. It is an industry where the ability to compete globally in terms of technology, cost, quality and delivery is an essential prerequisite of success. This is a fact that governments around the world recognise in their policies towards the industry. Australia likewise must adopt competitive policy settings that support Australian automotive manufacturers finding their place in this sophisticated, technology driving, global industry, and ensure that these settings match those in force amongst our current and emerging trading partners.

There are four key areas of Federal Government automotive policy:

- Automotive Competitiveness Investment Scheme (ACIS)
- Tariff Rates on Automotive Imports
- Market Access agreements
- General Government Policies

Taken together, these four areas help determine environment for Australia's automotive industry. The Federal Government view is that it is for industry to turn these adjustment arrangements to its long term advantage. It has stated in its completed Automotive Action Agenda that:³⁴:

- Industry alone can define its niche in the world market.
- Industry alone can realise its potential as a global centre for design and engineering and for light metal die casting. Industry alone can turn Australia's resource and intellectual endowments to advantage in the race against greenhouse.
- Industry alone can make an asset of world-leading productivity in small production volumes. Industry alone can define a uniquely Australian paradigm of lean manufacturing.

The long-term goal of the industry must be to operate without sector-specific assistance, but in an environment that supports the elements necessary for ongoing and sustainable growth.

³³ "From The FAPM Executive" editorial in the June issue of the SAE-A journal, "Auto Engineer".

³⁴ DRIVING THE FUTURE: AUSTRALIA'S AUTOMOTIVE ACTION AGENDA – Department of Industry Tourism Resources

Regardless of the form and extent of Government support for the industry, Government must take into account the need for the 'policy environment' itself to be internationally competitive

Industry Comments

Given the niche business strategy with the outcome of radically reduced component manufacturing in Australia, potentially putting at risk vehicle manufacture and assembly, Industry needs a healthy, realistic environment that will help it embrace this new future.

Yesterdays Industry plan is not sufficient for tomorrow – Industry and both Federal & State government need to work together before the Industry moves beyond the point of no return.

Interviews indicated the Industry's desire for a better future, and the need to influence this through improved dialogue with Government on key issues, to ensure Industry views are known to government for ongoing policy development.

In addition to promoting Innovation and supporting Education, Industry also wants to dialogue with Government on other key issues to:

- Reduce the cost of doing business here (Tax etc).
- Ensure FTAs provide Market Access.
- Ensure ACIS is directed for the benefit of the Industry.
- Improving IR – important.

Note: There also was a range of views on tariffs. While some respondents felt tariffs are required to protect the Industry (supported by results reported in the recent FAPM/Ai Group study³⁵) it is understood that the industry shouldn't focus on protection and it needs to look after itself. There is the view also that a healthy environment to support and promote growth is the responsibility of Government – both State and Federal.

Cost of Business

It was identified that Australia's costs are similar to many other nations in terms of materials and labour – however the biggest contributor is overheads and these are high in Australia.

Some organisations have benchmarked the cost of doing business in Victoria and consider there to be an opportunity to focus on insurance, wages, stamp duty and State taxes, in order to match other State environments. There is preparedness for a 'commercial in confidence' discussion on this subject.

Export Focus

Automotive export value is substantial (\$5.4 billion), and the vision for growth to \$10 billion by 2010 needs to be revisited in light of the FTAs.

It is interesting to note that the Aerospace Industry which has the attention and support of the Federal Government to create a new Action Agenda can only envisage, after a five-fold increase, exports equal to \$3.5 billion by 2012 – this is less than the current automotive export in jeopardy.

Concern was raised as to the lack of automotive specific representation in Austrade and AISAG that would support Government review of membership and activity.

³⁵ *The Victorian Automotive Components Industry - COMPETITIVENESS, PROFITABILITY AND FUTURE STRATEGIES - March 2005*

The Victorian Government has an Export Advisory Program (for general manufacturing). Something similar needs to be reinstated for the automotive industry at a national level before opportunities are lost – a mechanism for cooperation between MVPs and suppliers, to define strategy for both MVPs and ACPs with tactics to follow.

Automotive Competitiveness and Investment Scheme (ACIS)

The Automotive Competitiveness and Investment Scheme (ACIS) provides Federal Government assistance to encourage competition and innovation in the Australian automotive industry during the period of transition to lower tariffs. The Government's goal is to achieve sustainable growth both in the Australian market and internationally, in the context of trade liberalisation. The benefits under ACIS are in the form of import duty credits that can be used to offset Customs duty on eligible imports. These credits can also be sold or transferred.

ACIS commenced on 1 January 2001 and was scheduled to end on 31 December 2005. On 13 December 2002, the Government announced a 10-year extension to the program under the *ACIS Administration Amendment Act 2003* worth \$4.2 billion. The Scheme is to provide certainty for the industry in its planning for the next decade. Stage 2 of the scheme includes a \$150 million Motor Vehicle Producer Research and Development Scheme (MVP R&D Scheme). In conjunction with this announcement, automotive tariffs will fall from 15% to 10% on 1 January 2005, and then to 5% on 1 January 2010.

Recently there has been a groundswell amongst suppliers, believing ACIS has not provided benefit to the local industry in both R&D value and supply chain involvement. Further that the MVPs have been rewarded with import credits allowing the importation of goods further impacting the balance of payments. As a result the next model vehicles will have a greater percentage (%) of imported components and the MVPs potentially have no future major model designs beyond the next releases.

It is important to ensure that future ACIS funding and expenditure is directed to benefit the future of the local industry – both MVPs and ACPs:

- Not to prop up the Industry, but a focus on growth and competitiveness.
- Investment in line with the identified vision / niche strategy.
- Linked to innovation & education and training initiatives.
- Conditional on Industry buy-in, collaboration and cooperation.
- Focused on developing supplier capability.

It is perceived that a refined audit process is required to ensure that ACIS funding is used correctly and provides results in line with the strategy and policy objectives.

It is also desirable to revisit the benchmarks, to address the offsets – if the reality is a reduced percentage of local content due to global sourcing, it may be necessary to re-qualify how ACIS is used in terms of the net value returned to community.

Industrial Relations

Many respondents indicated that demarcation issues, along with training and career progress issues are imposing inefficiencies and costs on manufacturing. Improvements to IR practices needs to be on the agenda and addressed in terms of the future needs of all industry stakeholders.

However the focus on the current IR issues is considered a side issue to the more critical issue of automotive industry strategy – it won't matter too much what incremental gains are wrought if the Industry sinks – what is key however is that employers and unions work together to embrace the new automotive realities.

Working Group Notes

Background material reflects there is an issue of ownership by the automotive industry of the current situation – although both MVPs and components makers now reflect a sense of urgency.

At the Federal Government level there is perhaps a perception that things are fixed – there was a completed Action Agenda (2000) and resulting policy (2002) – Industry is now moving to minimum tariff levels and has been provided ACIS (\$4.2 billion) for support.

But is this so? – many view the possibility that the Industry is on a ‘crisis path’ as a result of globalisation.

There is a need for further dialogue, but a Productivity Commission review in 2008 will be too late. The fact that there is no single national representative body for the automotive manufacturing Industry makes it difficult to get the Industry together – the MVPs have differing agendas driving their ongoing investment but a national strategy is essential.

There is more danger for the Automotive Industry here than in the USA – our Industry is smaller – the supplier base here is easily impacted by imposts such as global sourcing as there is no option for alternative customers locally. Key suppliers are now talking about diversification.

The future structure of Industry may be very different – it could possibly be only two or three manufacturers. There is a question as to whether the community understands or cares.

“The question for engaging policy makers in Canberra is not so much that they see the auto industry is going gangbusters as shown by the 1 million sales level, but rather in that they think they have put in place a generous set of policies for the industry. The ball now is in the court of the industry and to a degree the Victorian and South Australian State Governments who have the greatest stakes in its successful adaptation to the new realities.”

There need to be an integrated strategy for the Industry (similar to what is being undertaken by China and Thailand). Industry and the two State Governments need to think strategically enough to identify the key issues and put a plan in place in order to engage Canberra – **a single vision for the Industry nationally.**

We shouldn’t downplay Australian Industry capability – we should understand there is recognition by GM, Ford, Toyota HQs of the performance of their Australian subsidiaries.

Australian Industry does have capability – our strengths include design, engineering, agile & niche manufacturing capability - this is something we can build off. While it was noted that this may not be appealing to the ACTU, as it points towards a small number of people with upper end skills, the reality is that manufacturing will not be a huge employer – the future is in the ‘smarts’ and this is the only basis to save the industry.

The stakes are high and the competition is increasing. Low cost, high quality and sophisticated product from China is now a reality - multinational MVPs are investing heavily in China making vehicles for both China’s increasing domestic market and also for export – capacity will soon outstrip demand and cars will be exported to markets such as Australia. Globalisation will also bring an increasing amount of product from Thailand, Eastern Europe, India, and South America.

The multinational MVPs will leverage Australian capabilities for as long as we have them. We need to determine what makes it desirable for the MVP decision makers to keep subsidiaries

here. We have a history, experience and capability – the Australian automotive industry competitive advantage is its people, skills and stability. We need to work collaboratively to ensure ongoing investment here - all stakeholders need to be involved in the development of a national strategy.

Whilst there has been engagement by the FAPM there needs to be mobilisation of the MVPs for a ‘whole-of-industry’ solution. The FCAI as the current representative body for all MVPs is a conduit to the CEOs of the local vehicle manufacturing companies, and as such the FCAI needs to be engaged in any future dialogue.

Keeping a positive attitude is also important – “if we fail we need to keep trying....it is important that we don’t give up”.

The following initiatives were identified by the working group:

Initiative A:

Engage Government

It is key that the Victorian Government and the SA Government work to put together a clearly thought out and robust plan (vision, strategy, and actions) – they can’t address this independently. In order to involve the Federal Government, such advocacy needs to be a very different plan than in the past – the Industry needs to inform the Federal Government what it will do and what it needs help with – it needs to synchronise with other policy settings – it needs to encompass the reality of the future.

Initiative B:

Identify how we continue support of Australian competitive advantage

- 1. Country Risk Argument – Australian benefits versus other countries.*
- 2. Key Elements – agile, innovation, lean capex, flexible manufacturing and fast to market.
The performance of these elements is a function of education, practice, policy. The question needs to be asked “should enabling policies be reviewed & asked whether the focus needs to change, and if so, how?”*
- 3. Government needs a positive economic benefit – a future focus.*
- 4. A single leadership group with the FAPM/FCAI and Vic and SA Government is essential.*
- 5. Supplier Development - leverage learnings of activity on contractor improvement in the Defence Industry (refer Ai Group Defence Council) and get FAPM involved.*

Initiative C:

Engage MVPs - This is the primary role of the FCAI

There is a need to understand MVP strategies and undertake Policy facilitation.

Recommended Stakeholder Actions

- Engage State Governments – together develop a clearly thought out and robust plan (vision, strategy, and actions) and seek Federal Government support for new initiatives.*
- Identify how to support the Australian Auto Industry’s competitive advantage – refer items identified by the Working Group – key is to increase the focus and effort on export.*
- Integrate learnings from parallel activity in the Aerospace, Defence and Advanced Manufacturing Industries, including recent Action Agendas.*
- Support industry stakeholder collaboration in development of an updated strategic plan for the Industry.*

The industry as a whole needs to pull together more

There is a clear need for joint initiatives in some fields, such as:

- *Searching for overseas technology partners and supply sources, and/or lower-cost alternative locations within Australia;*
- *Initiating and developing strategic alliances with technology partners;*
- *Product co-development with MVPs;*
- *Providing engineering support to the industries of emergent countries, notably China;*
- *Business and economic analysis, which will be essential to the successful pursuit of technology and sourcing alliances;*
- *Project Management;*
- *Developing applications of specific technologies in which Australia may be advantaged, making more use of public and university capabilities – there may be an opportunity to reorient ACIS support in this direction;*
- *Ensuring that the spirit as well as the letter of the ACIS scheme is respected;*
- *Tackling the critical issue of industrial relations and getting the industry off the lethal annual wage escalator;*
- *Promoting Australian automotive capabilities abroad*

autoPOLIS report for the FAPM - April 2005³⁶

³⁶ *autoPOLIS report: A Vision for the Australian Automotive Industry – Prepared for the Federation of Automotive Product manufacturers – April 2005*



APPENDIX

General Distribution -

- Working Groups
- Partnership Victoria Major Stages Chart
- AIC vision & strategic plan

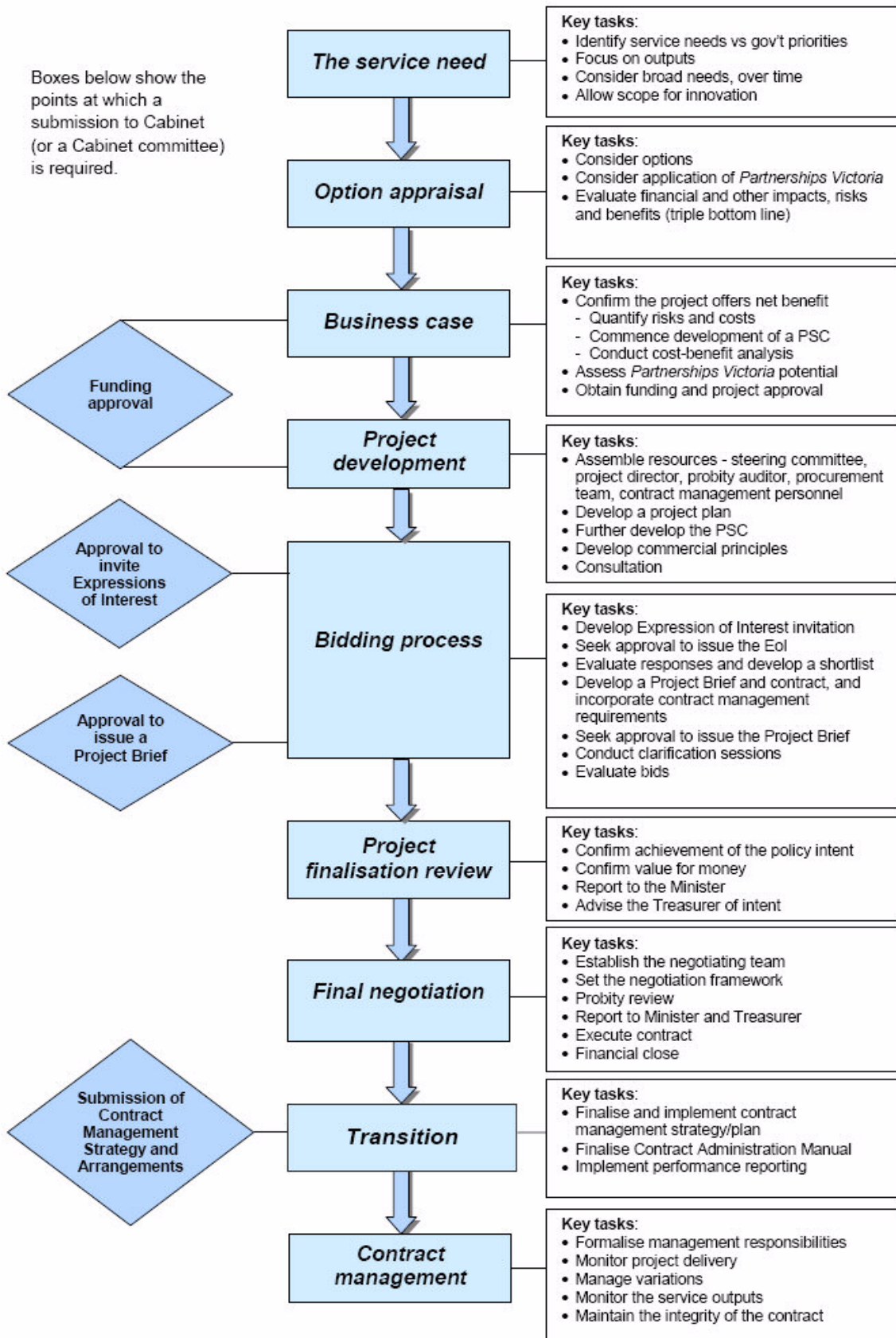
For FAPM & DIIRD distribution only –

- Document desktop study
- Interviews Transcripts

Appendix 1 - Working Groups

Group	Chair and nominated AISAG members	Nominees beyond AISAG (suggestions...)
<i>Leadership</i>	Chair: Ivan Deveson	
<i>Supplier Development</i>	Chair: Jim Griffin Barry Moncur Peter Upton	Ford nominee Mitsubishi nominee Holden nominee Toyota nominee Deloitte
<i>Positioning (Where Australia fits in the global marketplace)</i>	Chair: Bob Franklin David Stobart	Holden nominee Geoff Chamberlain
<i>Product & Process - Innovation</i>	Chair: Bruce Griffiths Barry Moncur	AutoCRC Ford nominee Holden nominee TMCA nominee Mitsubishi nominee VPAC
<i>People - Education and Training</i>	Chair: Peter Thomas Phill Murphy Chris Whittaker	Daine Alcorn (RMIT) Aleks Subic (RMIT) Peter Hodgson (Deakin) Noel Miller (Deakin)
<i>Promotion and Communication</i>	Chair: Ivan Deveson	
<i>Policy</i>	Chair: Peter Thomas Phill Murphy Barry Moncur	David Charles (Allen Consulting) Leigh Purnell (Ai Group)

Appendix 2 - Partnership Victoria Major Stages Chart



AUSTRALIAN AUTOMOTIVE INDUSTRY IN 2020

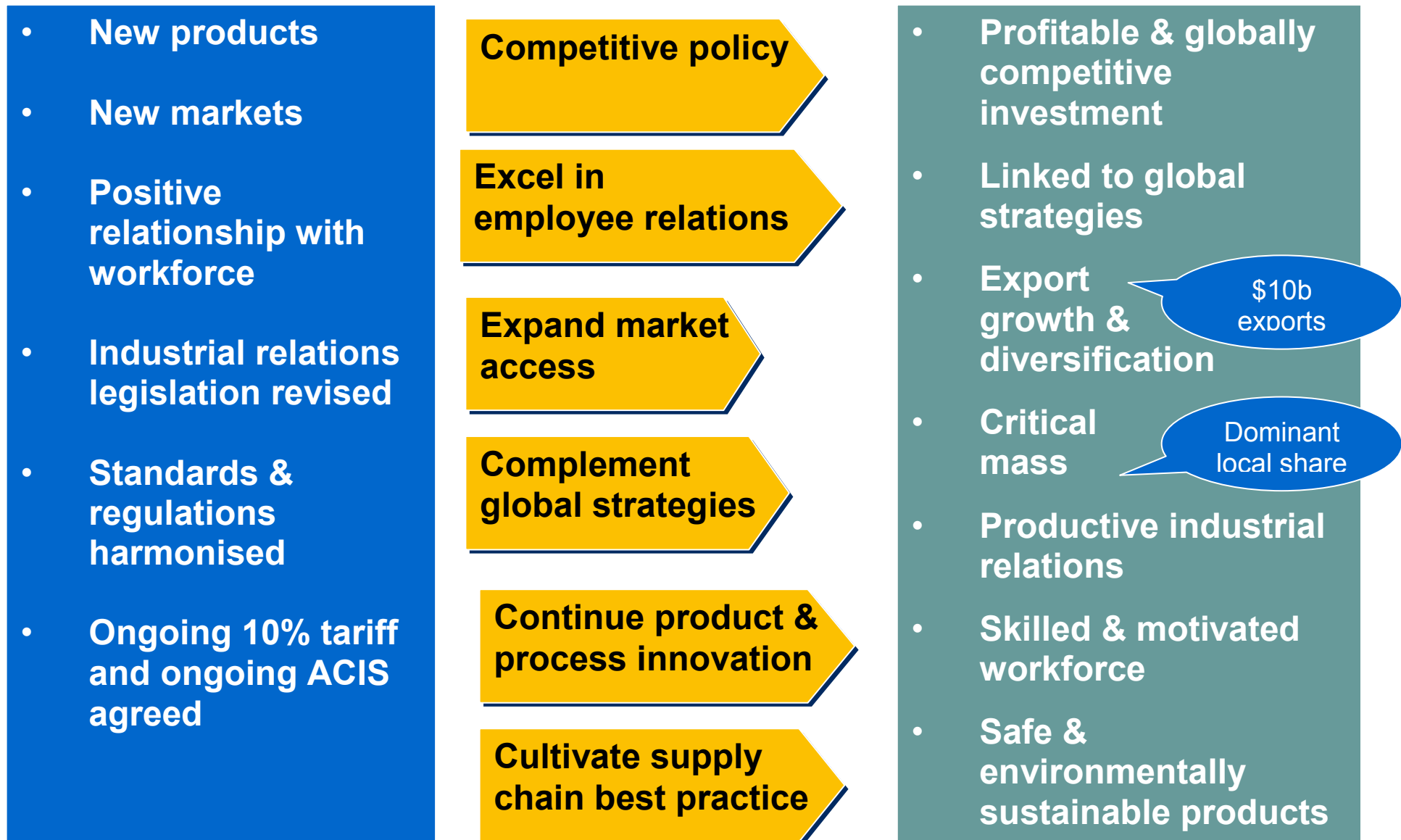
Our Vision is to be:

Innovative, competitive and an integral part of the global automotive manufacturing industry

Our Mission is to create:

- A financially sustainable Australian industry
- An innovative and flexible product and process development capability
- A world leading industrial relations environment
- The capacity to attract and retain skilled and motivated people

AUTOMOTIVE COUNCIL STRATEGIC PLAN TO 2010



BY JUNE 2005

STRATEGIC PATHWAYS

2010 OUTCOMES

Consultant Contact Details

VCAMM Limited
PO Box 62
BELMONT VIC 3216

Mr Brad Dunstan
Chief Executive Officer
brad.dunstan@vcamm.com.au
0418 988 096

Mr David Owen
david.owen@vcamm.com.au
0408 300 370