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Senate Inquiry - Future of Australia's Automotive Industry

I refer to your invitation to make an interim submission to the above named inquiry. My company, Applidyne, is one of Australia's leading engineering design consultancies. We have developed new class-leading products and technologies for our clients in a broad cross section of industries including mining, defence, automotive, consumer goods and medical and healthcare equipment. A representative sample of our projects can be seen at <http://www.applidyne.com.au/index.php?select=68>. Our clients are predominantly manufacturers based in Australia.

We have a long track record in automotive engineering for clients both in Australia and overseas. We have a strong desire to remain involved in the automotive sector and we consider that there are significant opportunities for the development and commercialisation of new automotive technologies, particularly with regard to electric vehicles.

The vehicles of the future will be as much a product of telecommunication, internet and energy generation, transmission and storage technologies, as current automotive technologies. There will thus be massive opportunities as these technologies are developed in the decades ahead. The family car of the future will be self-driving, self-navigating, will provide entertainment, be a workspace and will play a key role in household energy supply. The car of the future will be to the car of today what the smartphone of today is to the telephone of yesterday. The next decades of automotive development will be an exciting and wild ride. In our view, Australia cannot afford to miss out on being involved.

We made a submission to the senate inquiry into the Automotive Transformation Scheme (ATS) which is very relevant to the current inquiry. Rather than reproduce it here it can be found at [http://www.aph.gov.au/Parliamentary Business/Committees/Senate/Economics/ATS_Amendment_2014/Submissions](http://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Economics/ATS_Amendment_2014/Submissions) -submission #18

Over the 21 years that we have been developing new products and technologies for our clients we have seen an accelerating decline in product R&D activity in Australia, particularly in the automotive sector. This has coincided with the loss of "economic complexity" in the Australian economy. For an excellent overview of this concept and the ramifications please refer to the submission to the ATS senate inquiry by the Workplace Innovation and Social Research Centre (WiSeR) at Adelaide University

http://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Economics/ATS_Amendment_2014/Submissions - submission #15. Section 2 of this submission provides an excellent summary. The article at <http://theconversation.com/for-want-of-industry-policy-our-living-standards-are-set-to-fall-23317> is also useful.

The key points that we wish to make are:

1. Applidyne's most successful clients have been companies that have invested in the generation and exploitation of new intellectual property (IP). This has resulted in world leading products and a sustainable competitive advantage in the global marketplace. In an increasingly global economy, Australia's knowledge based companies cannot compete based on price. We need to be smarter. We must focus on generating and exploiting new IP.
2. Many countries have realised that the generation and exploitation of new IP, often by start-up companies, is the path to economic prosperity and have made the environment for this more conducive than we have in Australia. Key aspects of this:
 - Employee share scheme (ESS)
 - In a venture capital poor environment like Australia where cash-poor start-ups struggle to attract and retain high quality people an attractive ESS is essential.
 - The federal government is now putting in place an ESS regime to address the current disastrous situation.
 - The proposed ESS does not go far enough. For an excellent overview see <https://www.linkedin.com/pulse/so-why-does-australia-keep-stuffing-taxation-employee-matt-barrie>
 - Patent Box
 - Patent Box schemes provide preferential tax treatment for commercialisation of new IP.
 - Eight EU countries including the UK offer a Patent Box scheme- see <http://www.pwc.com/gx/en/tax/assets/pwc-global-r-and-d-incentives-brochure-nov-2013.pdf>
 - There is no Patent Box scheme existing or proposed in Australia.
 - R&D Tax Incentive
 - The Australian R&D tax incentive provides a strong incentive to conduct R&D in Australia and is a very substantial benefit to Applidyne's clients in developing new products.
 - Is increasingly uncompetitive on a global basis - see

<https://www2.deloitte.com/content/dam/Deloitte/global/Documents/Tax/dttl-tax-global-rd-survey-aug-2014.pdf>

- Needs to provide a quarterly payment to small companies rather than annually to assist start-ups with cash flow.
3. Companies in the automotive sector should at this point in time receive additional support for R&D and commercialisation to that provided for other companies because:
 - There is substantial existing capability and infrastructure in the automotive sector which is currently dissipating, and once lost is very difficult to replace.
 - The technological base of the automotive industry is one from which other future industries may grow. It is thus vital to protect and grow what is left of this base.
 - The global addressable market is enormous - after all, the second biggest expenditure by most households is on cars.
 4. The current allocation of funds to the ATS is unlikely to be spent based on the current trajectory of the industry. The support currently provided by the ATS for automotive R&D is very limited:
 - Motor vehicle producers (MVPs) in a "start-up" phase cannot claim for their R&D until they are registered as an MVP. This requires production of 30,000 vehicles or engines annually (can be waived at the Minister's discretion). Even then, the R&D must not be for own-use, unless it is R&D for engines. The definition of engines precludes electric motors - i.e. electric vehicles, which are the future, do not have "engines" as defined under the ATS.
 - The amount of R&D that can be claimed is limited to 15% of the "eligible investment amount" and 5% of sales once production commences.
 - The situation for component manufacturers (ACP's) is different in that they can claim R&D for own use, but the amount that can be claimed is still capped at 15% of the "eligible investment amount" and 5% of sales once production commences.
 - A clawback provision applies if the R&D tax incentive is claimed, eroding the benefit by 10%.
 5. The ATS should be amended to support R&D by existing and start-up automotive companies. Our suggestion on how this may be best achieved is the establishment of an **Automotive Innovation Loan Fund** as an adjunct to the ATS:
 - The ATS funds that are likely to be unspent should be placed in this perpetual loan fund for companies that are solely or primarily automotive.
 - This fund should lend money for R&D and early stage commercialisation to new technology based ventures in their early stages (certainly pre cash flow positive).
 - Applications should be assessed on a competitive basis, by a panel

comprised of industry/business leaders. The majority should not be from the automotive industry but from other advanced technology sectors to avoid the undue influence of entrenched automotive thinking. Preference should be given to IP rich ventures.

- The maximum size of loans should be big enough to facilitate ambitious projects; larger projects (say over \$30m) should be split into stages of \$30m or less with subsequent loans contingent on milestones being met.
- The loan should be repayable at an agreed rate from gross profits (eg 15% of gross profits to be applied to the loan).
- A low interest rate (eg Reserve Bank rate) should be applied.
- To ensure that only ventures with good commercial prospects are funded the loan should not exceed 300% of cash funds (i.e. not in-kind etc) provided by the company. To give start-up ventures a better chance to raise this capital loans should be granted subject to this capital being secured within a set timeframe (e.g. 6 months).
- Loan repayments and interest should accrue back to the fund to enable it to continue in perpetuity.
- The application, reporting and acquittal process should be as free of bureaucracy as practicable, and the time frame from application to approval should be short (ideally four weeks, no more than six). The process followed by the South Australian government's excellent Innovation Voucher Program (IVP) could be used as a guide.

Yours faithfully,

**Paul van de Loo MIEAust CPEng
Founder and Technical Director**