applidyne
Engineering Design Solutions

Ref: I101406

Committee Secretary
Senate Economics Legislation Committee
PO Box 6100
Parliament House
Canberra ACT 2600
AUSTRALIA

29 October 2014

Dear Sir/Madam,

Re: Inquiry into the Automotive Transformation Scheme Amendment Bill 2014

I refer to your invitation to make a submission to the above named inquiry.

My company, Applidyne, is one of Australia's leading engineering design consultancies. We have for over 20 years 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.

I believe that as a firm working in R&D across a broad range of industries we are in an unparalleled position to monitor the health of technology development and manufacturing in Australia. It is from this standpoint that I wish to make some observations for the committee to consider:

1. Suppliers of goods and services to the automotive industry such as toolmakers, material suppliers, machine builders, providers of specialised processes and equipment (eg welding, surface coatings, heat treatment, spring manufacture, etc) provide a critical service to other industries, often smaller and more fledgling industries. The demise of the automotive sector will have a major impact on the viability of these suppliers. I believe that we will be at a serious risk of dropping below "critical mass" where this ecosystem of firms cannot be sustained, threatening the future of other industries that rely on their products and services. These include medical, healthcare, defence, and biotechnology sectors to name a few.

2. We have witnessed a gradual reduction in the volume of automotive technology development in Australia as GM, Toyota and Ford have lost

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sales and increasingly sourced components from overseas. We have witnessed first-hand the adverse impact that this has had on the supply chain. It has also impacted severely on my business. A decade ago about 60% of our work was automotive. In the last five years, with the exception of two small contracts in Detroit, we have not had any automotive work. We have observed growth in some other industries, particularly in medical and healthcare products. However the combined growth of these industries has not been sufficient to offset the decline in the traditional industries such as automotive and whitegoods. We have observed this ripple adversely through the supply chain and the attendant loss of technical capability for the last decade or so. I believe that this ripples more widely than most economists and analysts seem to think – I am thus fearful that the employment impact of the loss of the automotive manufacturers is being underestimated.

3. The loss of technical capability will have very significant detrimental impacts on Australia:
    a. It makes it more difficult for technology start-ups to develop their technology as the suppliers that they require will cease to exist locally. We effectively drop below the critical mass required to develop new industry.
    b. Reduced local capability in the development, maintenance and support of defence hardware, reducing the capability of Australia to defend itself.

4. We have failed to build new industries to replace the automotive and whitegoods sectors. As such the current schemes (eg the $155m Growth Fund) to support the transition from automotive manufacture are flawed as they focus on retraining workers and providing assistance with capital expenditure by industry. The problem is that there is not sufficient industry that is short of workers or that is inclined to spend on capital equipment.

5. There is insufficient support to develop new industries and new ventures in Australia. It is notoriously difficult to raise private funds in Australia for new ventures, particularly at the seed and early development stages. Government assistance is very limited. As discussed above, the “Growth Fund” and the like will not provide growth as they do not address this fundamental problem.

6. Even if there was sufficient support to establish new ventures and industry in Australia, what industries or sectors should we as a country target? I have read countless government documents that identify “new markets” and “advanced manufacturing” without providing any clues as to what these are. The implication is that there is some untapped realm we should venture into where we our automotive suppliers and workers can rapidly become productive, sell to the world and generate incomes to keep as all

in the manner to which we have become accustomed. Nothing could be further from the truth. The truth is that the whole world is aggressively addressing the commercialisation of new technologies and tapping into new markets, mostly with very substantial government support and backing. For us to think there is some sort of easy money to be made if we just lob our automotive suppliers and workers in that direction is fanciful.

7. I believe that if sufficient government assistance is provided to support new ventures in Australia we will see new industries develop that will enable us to maintain the technical capability of our automotive supply chain and employ displaced auto workers. Government assistance should be provided as loans repayable from future profits rather than grants. Grants are not desirable as they do not engender sufficient incentive to succeed in the recipient and they also fall foul of the R&D tax incentive clawback provisions, rendering them ineffective.

8. Contrary to current "groupthink" I think that one of the more likely industries in which Australia can succeed is the car industry. Yes, the car industry. A very different car industry to what we currently have. All of the most profitable car companies build premium vehicles. Porsche, BMW and Tesla are good examples. And they predominantly build them in high labour cost countries – Germany, the UK and the US. Tesla (www.teslamotors.com) is a particularly instructive example of what can be done. Established only in 2003 in California, focussing on premium electric vehicles with superior technology, the company now employs 6,000 people and has a market capitalisation of $30 billion – more than half that of GM. Imagine if we could do that in Australia! I believe that we can. Australia has the talent, technical capability and the suppliers (note that Australian company Futuris supplies the seats for the Tesla Model S – but makes them in the US). Applidyne has identified an opportunity to start a Tesla like operation in Australia. We are happy to provide additional information on a commercial-in-confidence basis. Time is of the essence however - as our skills and capabilities dissipate it becomes increasingly difficult. It is interesting to note also that Tesla is currently recruiting automotive engineers in Australia for employment in California (http://www.professionalsaustralia.org.au/newsviews/latest/Tesla.pdf). The other key factor is government support. Even Tesla did not succeed without a $465m loan from the US government. It has since repaid this loan in full.

9. The car industry, like most industries is strongly backed by the government in most countries. The UK has a £500m Green Car Fund (http://www.energylivenews.com/2014/04/29/uk-revs-up-green-car-industry-with-500m-fund/) to support further development in their thriving car industry. The US has bailed out the big three and lent money to Tesla as mentioned above. It would appear that they do this as the stakes are

high. Let's not forget that a car is the second biggest purchase most households ever make. To see all of this money head straight offshore is unthinkable for most developed economies. It should be unthinkable for us also. A hypothetical Australian premium car manufacturer making 50,000 cars p.a. (note that Porsche makes 140,000 p.a.) with an ex-factory price of $75,000 and a gross margin of 20% represents a gross profit of $0.75 billion. What other industry are we going to establish which can match that?

My conclusion is as follows:

The $900m the government is seeking to save in the ATS should be redeployed to an "Innovation Loan Fund":

1. This fund should lend money to new technology based ventures in their early stages (certainly pre cash flow positive).
2. Preference should be given ventures to the automotive sector and those that benefit companies most at risk in the proposed withdrawal of the ATS.
3. The loan should be repayable at an agreed rate from gross profits (eg 15% of gross profits to be applied to the loan).
4. A low interest rate (eg Reserve Bank rate) should be applied.
5. To ensure that only ventures with good commercial prospects are funded the loan should not exceed 300% of private capital raised by the venture. To give ventures a chance to raise this capital loans should be granted subject to this capital being secured within a set timeframe (eg 6 months).
6. Loan repayments and interest should accrue back to the fund to enable it to continue in perpetuity.

Yours sincerely,

Paul van de Loo
Technical Director