

Dr. Greg Herbert
PO Box 376
Crows Nest NSW 2065
Tel. 9419 7851
stanbridge2@bigpond.com

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David Murray AO
Chairman
Financial System Inquiry
GPO Box 89
SYDNEY NSW 2001

Dear Mr Murray,

Reply to:

FINANCIAL SYSTEM INQUIRY INTERIM REPORT –
“PREPARE NOW FOR FUTURE CHALLENGES”

Submission: Greg Herbert

In this submission I have addressed the priority issue, FUNDING AUSTRALIA'S ECONOMIC ACTIVITY – by using the nation's finances in the most efficient way that will:

- maximise growth
- increase employment opportunities, and
- maximise wealth generation well into the future.

This can be achieved when the nation's finances are mobilised and made available economically and competitively for –

- Massive increase in value adding;
- Developing a culture of innovation and its implementation;
- Rapid growth deployment and ownership of industries where Australia has a strong competitive advantage;
- Maximising Australian control of our industries, companies and services;
- Provision of low cost and flexible loans with a fixed repayment period for growth, new marketing approach, exporting, new product development and diversification;
- Funding the development of very large projects.

I MASSIVE INCREASE IN VALUE ADDING - of our commodities and services.

The value of a commodity, products or services, often when it is value added, can increase its value 5-fold, thus providing the cash flow for nation building, company growth employment and development. Using this simple principle has allowed China and Korea to

be so successful providing rapid industrialisation and strong employment growth. Germany, a Western country, continues to apply this principle so successfully and so can we.

RECOMMENDATIONS:

Australia should have value adding as a National Focus for all departments, especially Industry, Agriculture, Health, Mining and Resources and Tourism's departmental policy. Each department in its annual review is to report on, in a progressive five yearly table with comments, the degree of uptake and growth of value adding undertaken within the department.

II DEVELOP A CULTURE OF INNOVATION ACROSS THE NATION AND ITS IMPLEMENTATION

The vehicle I propose for developing a culture of innovation across the nation is THE AUSTRALIAN NATIONAL INNOVATION AND APPLICATION CENTRE (TANIAC).

TANIAC aims to -

1. ensure that innovation in its various forms is a basic and core activity of a company;
2. that it is an essential element in the company's strategy and its reports;
3. provides the knowledge of how to innovate and its implementation for those Australian citizens willing to pay a small course fee;
4. inform Australians that TANIAC has a national course in Innovation.

TANIAC develops this culture as it reaches across all levels of learning, from those with MBA's seeking promotion in their companies, to those unqualified academically on the shop floor with either a brilliant idea and keen desire to develop a product; or to those that have an interest in innovation and would like to learn how it operates.

NB MBA's or graduates doing an MBA would be interested as the TANIAC course would allow these graduates to add TANIAC ASSOCIATE to their CV's and degrees. This potential would further encourage CEO's and senior management to seek products with the ASSOCIATE so that their company could more rapidly move into and develop innovative products.

The structure, value costing and timeline is covered in the Appendix, including cost benefit. In summary for just 32 million dollars over three years the nation could have the possibility of an innovation culture. Just the profit from one successful product could in six to seven years exceed the early yearly cost of TANIAC of 9 million dollars.

The greatest benefit from TANIAC is the possibility of creating future Australian Champions, companies that will ensure Australia's future.

Innovation is the seed you plant to grow a new product while an innovation culture is the field from which many products can grow. Australia needs this field, this innovation culture and TANIAC will provide it.

See Appendix 1 - Innovation

RECOMMENDATION:

Australia must establish and finance TANIAC for at least five years to develop a national innovation culture and for TANIAC to be the first port of call for potential innovators of new products to acquire knowledge, advice and skill. TANIAC's innovation culture will be the field from which many new products will grow and so will employment and opportunity.

III RAPID GROWTH DEPLOYMENT AND OWNERSHIP OF INDUSTRIES WHERE AUSTRALIA HAS A STRONG COMPETITIVE ADVANTAGE.

Australia has an absolute need to find three new pillars of growth and development that –

- provides secure export income;
- provides a degree of import replacement income;
- assists in balancing our trade;
- assists in reducing the national debt;
- provides quality employment, and
- ensures a sustained quality of life and wealth well into the future (at least 20 years).

Australia's and the world price for iron ore (Fe) and coal and gold (Au) have all peaked and although volumes exported and exportable are increasing it is most likely these commodities will start to taper in three years for Fe ore four years for coal and one to three years for Au. liquid petroleum gas LPG volumes of exports will increase quickly, however with the USA to commence exporting its gas it will result in a fall in world gas prices and the fall will be marked. Thus relying on commodities to provide Australia with its export income when so many of our previously locally manufactured goods, e.g. all our cars by 2017/18 white goods many electrical and electronic products has ceased and are imported or will be, means Australia's terms of trade and trade balance will fall rapidly and dramatically unless the three new pillars of growth are developed and developed swiftly.

Supporting the growth of the three new pillars will be a most efficient use of the nations finances, in fact an essential life line for the nation well into the future.

The three new pillars of growth will be predominantly export orientated with a degree of import replacement, all of which will help our balance of payments. Australia too will become more competitive especially if an important component of one of the pillars "Mobile Robotics" is undertaken, is researched, further developed and then implemented in Australia. We currently lead the world in research in this field. It will lower the cost of production of new products allowing greater quality and range of suitable new goods and products manufactured competitively here in Australia.

Australia has five pillars of growth: Mining and Resources, Financial Services, Education, Tourism and Agriculture. The three new pillars of growth are:

- Biomedical devices, products, applications and services
- Innovative value added products
- Mobile robotics and advanced manufacturing

In these three pillars of growth Australia either has a leading position in the world that can be built on or through a culture of innovation be first with new products and applications.

PILLAR 1

BIOMEDICAL DEVICES PRODUCTS APPLICATIONS AND SERVICES

Australia is the leading location for biotechnology companies in the Asia-Pacific with over 1,000 biotechnology companies, 450 therapeutics and diagnostics and 600 – 1,000 medical technology companies. As reported in February 2012, there were 100 ASX listed life-sciences companies with a market capitalisation of \$31.4 billion. Australia offers world class science and was ranked number five globally by *Scientific American World View Report*.

Source: AusBiotech <http://www.ausbiotech.org/content.asp?pageid=25>

The combined biotechnology and pharmaceutical sector currently provides over 40,000 Australian jobs and there are over 10,000 people employed in the medical technology sector. The biomedical industry is Australia's largest high-technology exporter with almost \$4bn in export value in 2010-11.

This is an amazing base of biotech and life sciences companies on which to develop new world champions. Australia is a high wage cost country yet this sector is growing and offers much greater employment of these stimulating high tech jobs provided the commercialisation process is undertaken and supported utilising the most efficient use of government and private or public Australian based and owned company capital.

In the strategic review of Health and Medical Research, February 2013, page 212 item 6.2, support Research commercialisation recommendation 16. – Provide funding to address the twin 'Valleys of death' (i.e. preclinical and early clinical on page 213 of same report) the four funding recommendations are listed. All four fundings should be undertaken to give maximum growth to Biotech sector, however the third is the most critical area to provide the greatest benefit. This is to establish a Translational Biotech Fund (TBF) for early stage development of around \$250 m, funded by the Australian Government and the private sector on a one to one basis.

This is a superb model for commercialising novel drug and medical devices.

Advantages:

- Meets the funding gap for those important earlier trials phase 1 and 11 clinical trials where a funding drought exists.
- Provides funding of 10 million for each project for the expected duration of up to 7.5 or 15 years of the research and development phase.
- Targeted at the phase 1 or 11 clinical trials which will bring these products up to the final commercialisation stage III clinical trials where further funding can be arranged.

If then successful, Australia will have another Australian champion and a world market with product that would be manufactured in Australia to maintain the quality control.

The TBF fund structure details are on page 221 of “Strategic Review of Health and Medical Research”, February 2013, Chapter 6 ‘*Enhance Commercial Pathway to Impact*’.

See Appendix 2 - 6. Enhance Commercial Pathway to Impact

NB The structure should be modified to ensure Australian control and ownership by having it accommodate 80% Australian investors with a maximum of 20% of the fund from offshore investors.

Similarly to provide maximum efficiency of our nation’s finances in the use of the funds –

1. The management fee should be 1.5% of committed funds for the first five years and 1.0% p.a. of invested capital for next five years.
2. The Managers ‘Carry’ should be 20% of net realised distribution (NRD).

Mr. William D. Ferris AC who formed Australia first Venture Capital (VC) company CHAMP private equity, in an excellent submission titled ‘Submission re Venture Capital’.

See Appendix 3 – Mr William D. Ferris AC, Submission Venture Capital VC

Mr. Ferris wrote on the needs and challenges of Venture Capital when funding new enterprises and innovation in this country. He listed the three broad segments and the funding timeframes:

- Online business models (6 months to 24 months funding timeframe).
- High growth privately owned enterprises in traditional models (3 to 7 year funding timeframe). (These can be IT specialised manufacturing renewable energy projects agribusinesses or other products and services – Seem always to require increasing amounts of equity capital).
- Biomedical devices and drug development models (7 to 15 years funding timeframe). Due to the long timeframe with mobilised Venture Capital via this TBF (the Translational Biotech Fund), structure Australia can develop these pharmaceutical medical devices and benefit from one of very few intellectual property (IP) intensive sectors where Australia is internationally competitive.

We must move down this track quickly and have the government support on a 50/50 basis for TBF and set it up.

RECOMMENDATION

Establish a TRANSLATIONAL BIOTECH FUND (TBF) of 250 million, funded 50/50 with the private sector for financing and thus the initial commercialising of the Stage I and Stage II clinical tests of promising Australian Health, Medical, Bioengineering and Biosciences research.

RECOMMENDATION

A strong request that the \$7.00 co-payment for medical services be fully supported by the opposition, Labour, Greens and cross benches to ensure Australia has the financial capacity to undertake the medical research, commercialisation and preventive programs that support the good health we strive for in our lives.

The funding will ensure Australia has control of its own health direction and research by owning leading national medical champion companies able to research and compete fully and successfully with the multinationals of other nations. Without this funding, control is lost and our health diminished.

Which way do we turn?

PILLAR 2

INNOVATIVE VALUE ADDED PRODUCTS AND SERVICES

The design production and export of more innovative value added products and services are required by Australia now that our mining investment is diminishing and commodity prices falling.

The first step is the creation of an innovative culture across the nation to maximise the move to value added products.

TANIAC (The Australian National Innovation Application Centre) will achieve this objective as it is the first stop shop for acquiring innovation knowledge and skills of early stage innovation of an idea or service.

The second step is contact with Innovation Australia to help with co-ordinating further development of the idea or service and to assist the participant or company through the mind fields of funding, mentors, sites for the business, the start up needs and the need for targets and time lines and self management. At what stage should consultants, solicitors and accountants become involved, to what degree and which persons of these professions is experienced in start up needs as the company develops.

The pathways of innovation are varied and beyond this review. I do have over a hundred articles and it takes too long to review in writing those under Pillar 2 however a few comments on Venture Capital and funding would help.

Re Mr. William D. Ferris AC divider of Venture Capital into three broad segments of type of business, time lines, capital sources, needs and forms and likely difficulty within the group, and government recommendation, I concur with his recommendations and approach.

A summary of the Australia tech start ups landscape –
1500 start up founders
1000 start ups

15 incubators and accelerators
7 Student start up incubator programs
6 active Venture Capital Funds
22million Angel investment (2012)
79million only Venture Capital investment in start ups 2013 while there is \$1.84 trillion money in Australian Superannuation Funds.

Source: Australian Financial Review Box Aug2014, Page 10 (2014)

This snap shot of Technical start up investments does show a potential of funds available in Australian Superannuation Funds. Innovation Australia in its submission to Financial System Inquiry pointed out the difficulty in mobilising a small percentage of these funds as well as showing there could be a financial advantage for superannuation funds to change their approach regarding start ups and mid market firm investments.

For superannuation funds the small amounts invested and management time required to manage the investment and regulatory requirements does hinder any investment even though the return per dollar invested could be higher than the body of superannuation fund's investment.

My suggestion is that the "creation of a DEVELOPMENT BANK" could overcome the superannuation funds reluctance to invest in start ups and mid market firms.

I would like to hold a meeting with Mr. Murray privately to discuss this proposal "Creation of a Development Bank" its structure and how it could mobilise Superannuation funds to invest into start ups and mid market firms." There are additional areas too where a Development Bank could play a vital role.

PILLAR 3

MOBILE ROBOTICS AND ADVANCES MANUFACTURING

Mobile Robotics and Advances Manufacturing does provide Australia with a golden opportunity to be a world leader in a new field, markedly lower costs of production while increasing the quality of the products produced. This opportunity is Mobile Robotics. Currently Australia has leading research in three areas:

- A. In-depth experience with robotic shearing of sheep where difficult contours need to be followed as the sheep, while constrained, can vary its position to a small degree.
- B. Current research in a collaborative Research Centre CRC examining picking of fruit where the movement of the tree, the texture and colour of the fruit and the ability of the mechanical robotic picker to move to another tree for picking is being researched.
- C. In our mining industry BHP has driverless vehicles and automatic mining machines controlled remotely. These vehicles and equipments are mobile robotics in practice.

Combining the research from these three areas plus two others I am aware of, would, if formed into a "Mobile Robotics Institute" and funded by portion of the 125 million mobile

robotics share of the Mobile Robotics and Advanced Manufacturing Fund would create a new world leading industry within Australia and able to export.

ADVANCED MANUFACTURING

Much has been written of work in this area at a Victorian University and involves laser printing for small batch and single items or products. This technology Victoria is using to manufacture by printing a jet engine out of titanium. This will have many other applications and should be supported by the other half of the Mobile Robotics and Advanced Manufacturing Fund (MBAMF). This fund would require 250 million and be 50/50 funded by industry ensuring its success.

RECOMMENDATION

The government establish a MOBILE ROBOTICS AND ADVANCED MANUFACTURING FUND of 250 million with 50/50 FUNDING BY INDUSTRY.

SUMMARY

This submission shows how we can be most efficient with the nation's finances in ensuring the long-term growth, employment and wealth for our nation.

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