

**Tax Discussion Paper – Improved Competitiveness  
through Better Targeting the R&D Tax Incentive**

RSM Bird Cameron is one of the largest nationally owned accounting firms and forms part of RSM International, which is the sixth largest international accounting and consulting organisation.

In Australia, RSM Bird Cameron is one of the fastest growing mid-tier firms with over 115 Directors and Principals and over 950 employees operating out of 28 locations throughout Australia. Our staff operate across a range of industries, public, private, government and not-for-profit-sectors.

We appreciate the opportunity to make a submission in response to the Government's Tax Discussion paper "Re:think." We are responding to discussion question 39 "Does the R&D tax incentive encourage companies to conduct R&D activities that would otherwise not be conducted in the absence of government support? Would alternative approaches better achieve this objective and, if so, how?"

We provide specialist and extensive R&D Tax services for a broad array of industries and technologies, and assist entities ranging from start-ups through to multinationals. We are also actively and strongly involved in the "innovation community" through:

- Co-working spaces;
- Award programmes;
- Associations;
- Industry peak bodies;
- Sponsorships; and
- Pitch events.

We have responded to the questions posed through a number of sections below and have provided an attachment from a company that we have involvement with to represent their views, as we believe that these types of companies are not well represented in the development of innovation tax policy in Australia, yet value the scheme very highly and are arguably the most induced segment to make "additional," expenditure as a result of the R&D Tax Incentive.

### **Executive Summary:**

Our overriding comments can be summarised as follows:

- We believe the R&D Tax Incentive unquestionably does encourage companies to conduct R&D activities that would otherwise not be conducted in the absence of government support. We believe this is particularly the case for Small to Medium Enterprises (SMEs) and start-ups and companies in knowledge-intensive industries. This is supported by the majority of studies world-wide;
- Our anecdotal evidence is that the refundable R&D tax offset is the lifeblood of many innovative SME/start-up companies, providing critical early stage funding, which without, many would cease operations;
- As detailed in a Business Council of Australia (BCA) report titled "Survey of Research and Development Expenditure by Australian Businesses," (BCA report) undertaken in relation to the R&D Tax Concession, we also believe the R&D Tax Incentive is "super-efficient," in Australia, maximising the additional R&D expenditure at the firm level, while enabling the "claw back," of the additional R&D benefit from shareholders. This is a significant competitive advantage that Australia has over almost all other Organization for Economic Cooperation and Development (OECD) countries and should be exploited by the government in policy development;
- In evaluating the R&D Tax Incentive, the Government needs to consider the total benefits produced by the program and the "real," cost of the program through to the shareholders. There is a significant risk that the total benefits and real cost are not currently being modelled or considered;
- The object of the R&D Tax Incentive legislation needs to be re-written as the program is delivering benefits far in excess of generating additional R&D expenditure;
- The government needs to understand that post the mining boom Australia's opportunities lie in developing knowledge-intensive industries involving substantial intangibles such as Intellectual Property (IP). Australia is in competition with other OECD countries to host these industries and it needs an R&D Tax Incentive scheme that ensures that it can compete

effectively. The government's focus needs to be on "getting business in the door," in terms of developing a tax innovation policy that enables Australia to effectively compete with OECD countries and other strong regional regimes

- There are a number of changes that could be made to the R&D Tax Incentive, which if implemented we believe would increase collaboration between companies and universities, and increase the competitiveness of high technology companies in Australia in attracting foreign R&D expenditure; and
- The consideration of alternative approaches needs to acknowledge that approaches outside the tax system will not be "super-efficient," in the manner of the R&D Tax Incentive and that there would be significant transfer costs, and likely poor uptake by SMEs/start-ups.

### **Aligning the Object of the R&D Tax Incentive with the Government's Industry Innovation and Competitiveness Agenda (IICA):**

We believe there is a need to re-write the object of the R&D Tax Incentive legislation to reflect the 21st century nature of the global competitive economy with an increasingly skilled mobile labour force and mobile capital. The current object of the R&D tax legislation is "*to encourage industry to conduct research and development activities that might otherwise not be conducted because of an uncertain return from the activities, in cases where the knowledge gained is likely to benefit the wider Australian economy.*"

The presumption of the current objective is that a certain level of R&D activities are going to be undertaken in Australia regardless of the existence of the R&D Tax Incentive and the only benefit that is able to be obtained relates to "activities that might not otherwise be conducted..." This narrow objective does not recognise the truly global nature of business and the fact that companies of all sizes now have much greater options in terms of where they locate operations and highly skilled jobs.

We strongly believe that the object of the R&D Tax Incentive should reflect the actual benefits it provides, which should focus on new highly skilled jobs and knowledge-intensive industries. A better object would be, "creating new and maintaining existing highly skilled jobs and knowledge-intensive industries in Australia through:

- Encouraging industry to conduct research and development activities that might otherwise not be conducted; and
- Enabling industry to maintain the undertaking of research and development activities in Australia that might otherwise be performed overseas."

Although these may seem like nuanced changes, we believe the focus should be changed to maintaining and creating highly skilled jobs in Australia as this leads to GDP growth and enables the government to collect employment, consumption and other related taxes.

The government's IICA recognises the cost disadvantage that currently exists in Australia versus other OECD countries and the reports states, "*our (Australia's) costs are some 30 per cent higher than those in the United States.*" The level of cost disadvantage that Australia faces and its impacts in companies undertaking R&D activities in Australia should not be underestimated. The cost disadvantage of undertaking R&D activities in Australia is driving SMEs/start-ups to consider overseas locations for their R&D activities.

There are many other cheaper highly skilled countries that could undertake R&D activities for SMEs/start-ups and it is the R&D Tax Incentive, particularly the refundable nature of the tax offset for companies with an aggregate turnover of less than \$20 million that counterbalances the cost disadvantage.

Recognising that companies do have a choice about which country to conduct R&D activities in the object of the R&D Tax legislation also ensures that future considerations of the design of the R&D Tax Incentive take into account remaining competitive with other countries' regimes. This is particularly important for Australia given the cost disadvantage that is currently faced.

We strongly believe that many SMEs/start-ups would move their R&D activities or entire operations overseas if the R&D Tax Incentive was to be removed or significantly degraded, through for example a change to an incremental system, and have received feedback from a number of SMEs from diverse industry sectors to this effect. We have also been informed by senior personnel from large

organisations that significant R&D work would be shifted offshore if Australia did not retain its R&D Tax Incentive program.

### **How the R&D Tax Incentive Generates Additional Expenditure that would not Otherwise Occur Absent Government Support:**

Our anecdotal evidence in providing R&D Tax services for many years to SMEs/start-ups with a turnover of less than \$20 million per annum is that the R&D Tax Incentive unquestionably does generate additional R&D expenditure that would not otherwise occur in Australia. Our experience with the start-up/innovation community including SMEs is that there are multiple ways in which this occurs as follows:

- SMEs tend to be highly capital constrained with spending decisions often budgeted down to a micro level. The R&D Tax Incentive gives SME's, including start-ups, the ability and confidence to spend and plan for R&D expenditure knowing that there is additional taxation support from the Federal Government in the form of a refundable tax offset. For those in a tax loss positions, receiving a substantial cash refund of 45% of total R&D expenditure is particularly crucial in incentivising expenditure that would not otherwise occur. SMEs tend to spend more on R&D activities in the current year, where a level of certainty exists that a government rebate will be available to substantially assist in funding the next year's development program. Equity investment, such as Angel and Venture Capital, is almost non-existent for start-ups and debt is unaffordable given the business risks involved in innovative companies. Many SMEs have commented to us that expenditure on their R&D would have ceased without the R&D tax incentive, due to a lack of other funding options;
- Our experience providing R&D tax services to innovative SMEs/start-ups is that the timing of the company's R&D expenditure is brought forward as a result of accessing the R&D Tax Incentive, which is often a critical advantage where competitors are attempting to bring a variety of technologies to market;
- A range of large and SME/start-up companies now have the ability to undertake R&D activities themselves overseas or engage with international providers of R&D services (Contract Research Organisations or CROs) and are actively considering the optimal location to undertake R&D activities. The increased mobility of labour has been described in a speech by Roger Blake (General Manager, Tax White Paper Taskforce) where it was noted that *"it is also reasonable to think that with globalisation, labour mobility may increase in future, particularly for highly skilled workers, which would raise the economic costs of our progressive income tax system."* Our anecdotal experience is that SMEs/start-ups are actively evaluating countries' R&D tax regimes and other economic factors before committing to undertake projects in a particular country. The question that we face from SMEs/start-ups on a weekly basis is "do I have to undertake my activities in Australia to access the R&D Tax Incentive." The value of the R&D Tax Incentive is very apparent when you consider the comments in the Government's recent IICA which states *"our (Australia's) costs are some 30 per cent higher than those in the United States."* It is our strong belief that the R&D Tax Incentive is a major contributing factor in both maintaining existing and creating new highly skilled/knowledge-intensive jobs and industries in Australia, which is particularly the case for SMEs/start-ups where funding/cost constraints are such significant drivers of where to conduct R&D activities; and
- Large knowledge-intensive companies also highly value the R&D Tax Incentive and it is our belief that the R&D Tax Incentive does induce global firms to spend more of their R&D budgets in Australia. Roche Products Pty Limited (Roche) the Australian subsidiary of the world's largest global pharmaceutical giant Roche stated in a submission to the Business Tax Working Group dated 13 August 2012 that *"Roche is using, and will use, the advantage derived from the R&D Tax Incentive to demonstrate to our headquarters in Basel, Switzerland, the value of continuing, and increasing, R&D investment in Australia. This is particularly important given the decline in clinical trial activity and the substantial cost increases in recent years in conducting this R&D in Australia."* Other multinational pharmaceutical manufacturers have voiced similar sentiments in the past and we believe these views are broadly representative of all large knowledge-intensive companies.

## Does the Australian Tax System Generate Additional R&D Expenditure?

The large majority of relevant economic/econometric studies conducted both in Australia and internationally suggest that R&D Tax Incentives do generate additional R&D Expenditure. We have detailed above our anecdotal evidence as to how we believe the additional R&D expenditure is generated, and have listed below a number of economic studies that provide evidence of this as follows:

- A 2009 study on the financing of R&D and innovation by Bronwyn Hall and Josh Lerner from the University of California, Berkeley (published in the Handbook of the Economics of Innovation) focuses on the high costs of capital for SMEs and how retained earnings, augmented by R&D Tax incentives if they are available, are a cheaper option for funding R&D than debt or equity funding. This paper also demonstrates the importance of positive cash flow for R&D financing over ordinary investment;
- A 2010 report from the OECD notes the relative advantages of R&D Tax Incentive schemes through their non-targeted nature over direct support schemes such as grants, and the increasing adoption of such schemes world-wide. The advantages of volume-based schemes such as the current Australian R&D Tax Incentive over incremental schemes such as the previous Australian 175% Premium R&D Tax Concession is highlighted, as is the success of temporary increases in R&D Tax Incentives in helping companies in Japan and the Netherlands overcome the fiscal effects of the 2008 Global Financial Crisis (GFC). This paper also highlights the importance of on-going evaluations for monitoring the effectiveness of R&D Tax Incentive schemes;
- A 2012 report from Christian Köhler, Philippe Larédo and Christian Rammer from Manchester University that includes a summary of a large number of individual surveys examining R&D Tax Incentives in twelve countries over a forty year period, for which positive effects are noted for both incremental and volume-based schemes, although it does note the greater effectiveness of the latter. Although limited by a paucity of data, this report also notes the positive effect on a company's probability of introducing new products and new processes in the presence of an R&D Tax Incentive scheme;
- A 2014 report on R&D Tax Incentives by Bas Straathof and Elina Gaillard-Ladinska from CPB Netherlands Bureau for Economic Policy Analysis and others on behalf of the European Commission' Directorate-General for Taxation and Customs Union. This study presents a large body of data showing that volume-based R&D Tax Incentives are successful in stimulating R&D investment, in particular for SMEs. It also highlights the limitations of incremental schemes in comparison to volume-based schemes. The effectiveness of "Patent Box" type schemes is also noted, as is the readiness of multi-national firms to relocate operations to take advantage of both R&D Tax regimes and "Patent Box" type schemes; and
- A 1993 publication from the Bureau of Industry Economics (BIE), which undertakes an extensive analysis of the first years of Australia's R&D Tax Concession. The analysis highlighted the positive impact the R&D Tax Concession had for SMEs in particular, as well as the positive new welfare impact of the scheme for the Australian economy. Many of the arguments presented in this publication are relevant to the current review, and in the absence of a more recent study of comparable rigour it has been extensively cited as a demonstration of the success of programs intended to provide indirect support for innovative businesses.

Since the BIE publication, there has not been a substantial amount of research in Australia relating to the specific question of whether the R&D Tax Incentive does generate additional R&D expenditure that would not occur without government support. There is a need for government funded quality independent research to be undertaken, particularly research that investigates the total benefits to the economy of the R&D Tax Incentive, taking account the size of the firm, industry, its tax position (including franking account), and its R&D intensity in Australia (R&D expenditure/income), prior to any decisions being undertaken regarding the future of the R&D Tax Incentive. This type of detailed research has not been conducted in Australia since the 1993 BIE analysis of the early years of the R&D Tax Concession. We strongly believe that a tax review is not the appropriate forum to make industry policy, particularly at a time where Australia is struggling to be cost competitive.

As detailed above, our anecdotal evidence of SMEs/start-ups undertaking R&D is that they are strongly induced to undertake additional R&D because of the R&D Tax Incentive, particularly due to it providing a tax rebate for those in a tax loss situation. Based upon our experience preparing R&D

Tax claims for SMEs/start-ups and the evidence presented above in relation to large companies, we believe that different industries and segments of the Australian economy react differentially to the additional tax benefit provided by the R&D Tax Incentive. We also believe that substantial additional R&D expenditure is generated through the R&D tax incentive by SMEs including start-ups and intensive knowledge development industries, versus the rest of the Australian economy.

Our SMEs/start-ups have stated to us that without the R&D Tax Incentive they “would not have been able to fund further R&D,” and that “without the R&D Tax Incentive and they believe that they may not have survived without this critical early stage funding.” One of our innovative clients has provided its views regarding whether the R&D Tax Incentive has induced them to spend more on R&D activities. This is included as an appendix to this paper.

### **Benefits in Addition to “Additional R&D Expenditure”:**

The focus of most economic studies is in determining the extent to which government expenditure on R&D Tax benefits induces firm based R&D expenditure. What is generally not studied is the impact of degrading or removing R&D benefits. The increased mobility of labour has been described in a speech by Roger Blake (General Manager, Tax White Paper Taskforce) where it was noted that *“it is also reasonable to think that with globalisation, labour mobility may increase in future, particularly for highly skilled workers, which would raise the economic costs of our progressive income tax system.”* We believe that removing or degrading the existing volume based R&D Tax Incentive would result in many companies moving existing R&D expenditure offshore and highly skilled workers following, with increased economic costs as noted above.

In addition, there are many economic and social benefits of undertaking R&D activities in Australia that may be considered “additional,” indirect or consequential benefits of R&D expenditure in Australia. These benefits are not measured in economic studies that are solely focussed in evaluating whether “additional R&D expenditure,” is generated through R&D Tax benefits. Examples of these additional indirect benefits include the following:

- Economy wide consequential benefits of additional induced R&D expenditure and R&D expenditure that would have otherwise moved overseas, such as GDP growth;
- Additional government revenues generated through employment, consumption and State based taxes as a result of additional induced R&D expenditure and R&D expenditure that would have otherwise moved overseas;
- Social benefits such as maintaining or improving the unemployment rate due to additional job creation and minimising the number of highly skilled jobs moved overseas; and
- Social benefits such as enabling Australians to participate in clinical trials, thereby providing access to new treatments that would not otherwise be available in Australia.

The government’s Industry Commission produced a report in 1995, which modelled the removal of the R&D Tax Concession. It concluded that, *“the welfare reducing effects of reducing R&D assistance would build up quite slowly by reducing the growth of the stock of knowledge within the economy. Nevertheless, after ten years, the effect of removing assistance would reduce the nation’s output (GDP) by \$360 million each year. This was more than the (then) fiscal cost of the tax concession.”*

The BCA report provided detailed evidence of the negative effect associated with reducing the benefit available from 150% to 125% of expenditure on aggregate R&D expenditure. The report also states that *“... the message from the Industry Commission’s R&D study is that R&D is different. R&D assistance is both more justifiable, and per dollar, more important than most other forms of assistance. This is because although they are hard to measure directly, returns to the whole economy of R&D may be very high. Moreover there is a dynamic element which is not present in most industry assistance issues. One firm’s R&D today contributes to that firm’s “internal stock of knowledge” and provides a more developed base from which to work in the future. It also contributes to other firms’ “external stock of knowledge” upon which they build their own technological improvements in the future.”*

Both the Industry Commission report and the BCA report detail how the R&D Tax Concession that was in existence at the time provided more benefits to the economy than the cost. The benefits are much broader than simply generating “additional,” R&D expenditure and require genuine consideration by the government.

A recent example demonstrating the indirect consequential impacts of the R&D Tax Incentive can be found in an article in the Australia Business Review on Thursday 14 May 2015, titled “*CBA faces tax probe over R&D millions.*” In discussing ATO reviews of R&D claims lodged by the Big 4 banks, the article revealed that the ANZ bank used \$44 million in income tax offsets in 2013 mainly related to the R&D Tax Incentive. The R&D expenditure of the large banks typically relates to IT systems/software development and most of the expenditure is either the salaries of employees or contractors.

We have included a calculation below to illustrate what the impact of the ANZ not conducting its R&D in Australia would be below:

Assuming that all the \$44 million related to R&D expenditure, this would mean that the ANZ had \$110 million of R&D expenditure calculated as follows:

$$\begin{aligned} &\$44 \text{ million} / 0.4 \text{ (non-refundable rate due to aggregate turnover greater than \$20 million)} = \\ &\$110 \text{ million.} \end{aligned}$$

The additional R&D benefit is calculated as:

$$\begin{aligned} &\text{The additional R\&D benefit of claiming the R\&D Tax Offset is 10\% of this \$110 million R\&D} \\ &\text{expenditure figure (40\% non-refundable offset – 30\% corporate tax rate)} = \$110 \text{ million} \times 10\% \\ &= \$11 \text{ million.} \end{aligned}$$

For a \$110 million expenditure amount that needs to relate to work done in Australia to be eligible for the R&D Tax Incentive, the ANZ only receives an \$11 million additional R&D benefit. The impact of this \$11 million additional R&D benefit will immediately be recorded in the franking account of the ANZ due to the reduced amount of tax paid.

Should the ANZ wish to distribute an amount of dividends such that insufficient franking credits are available due to claiming the R&D Tax Incentive, then the \$11 million additional R&D benefit amount may be “clawed back,” from shareholders through additional tax payments. This would occur if the ANZ issued a partially franked or unfranked dividend.

Multinationals such as the ANZ, which have global operations are quite easily able to move the location of highly skilled work such as software development. We have calculated the indirect impact of moving this work offshore to the Australian government revenues. This does not include GST, or stamp duty.

*Assumptions are:*

- An average individual tax rate of 30%;
- The \$110 million R&D expenditure is all paid to employees or contractors to which payroll tax is applicable; and
- Employees and contractors are based in Victoria for payroll tax purposes.

*Calculation:*

- Tax paid on salaries = \$110 million  $\times$  0.3 = \$33 million; and
- Payroll tax = \$110 million  $\times$  4.85% = \$5.3 million

Total additional Government employee tax revenue as a result of the ANZ’s R&D activities remaining in Australia is approximately \$38.3 million against an \$11 million additional R&D Tax cost to the Government, which does not include any amount “clawed back,” through franking credits. The \$38.3 million does not include GST revenue, or other State based taxes such as stamp duty. The additional GDP stimulatory impact of these employees being Australian based consumers is also not included.

While it is not possible to determine whether the R&D activities of individual companies would remain in Australia with removed or degraded R&D benefits, the high likelihood of this occurring given an increasingly competitive and mobile global economy, needs to be included in analysis and cost-benefit modelling undertaken.

## What Are the Real Costs of the R&D Tax Incentive to the Australian Government?

In evaluating whether the R&D Tax Incentive is the government's best policy option to induce additional R&D expenditure in Australia, the real cost of the scheme down to the shareholder level, modelling and assumptions supporting it need to be released by the Department of Treasury (Treasury). Until this occurs a frank and open discussion of the real cost of this scheme in Australia is unable to be undertaken, which thereby prevents comparisons of the real costs and total benefits produced.

The fundamental nature of the Australian tax system is that tax paid by a company will not be taxed again in the hands of shareholders. This is achieved through a dividend imputation system, whereby tax paid at the company level is available as a franking credit to be attached to dividends distributed to shareholders. In the context of the imputation system, the R&D Tax Incentive is arguably repayable by the shareholders of the company at the point that company profits are paid to the shareholders. This is because the franking credits eliminated on receipt of the R&D Tax Offset will result in higher individual tax liabilities, as fewer franking credits will be available for distribution. It is acknowledged that there are a number of situations where there will be a real cost of the R&D Tax Incentive when the franking credit does not apply.

Although the previous R&D Tax Concession scheme in the 1990s was based upon an additional deduction rather than an R&D Tax Offset, the impacts upon the franking account of R&D eligible companies is effectively the same. A finding of the study conducted by the BIE in 1993 in relation to the then-existing R&D Tax Concession was that 29% of companies in the survey that had claimed the R&D Tax Concession were in a tax position of either being impacted by R&D benefit washout at the shareholder level or modifying dividend behaviour to avoid R&D benefit washout. We believe that the results of a similar survey undertaken today would be comparable, and that Treasury modelling should take into account the fact that a substantial amount of companies in the year an R&D claim is made will be in a franking account position such that dividends distributed will result in shareholders paying more tax than they otherwise would have. The BCA noted in its subsequent report that *"...in most cases a Company has an ultimate ambition to become profitable (and so to pay tax) and it will then pass its tax payments back to its shareholders in the form of franked dividends. Accordingly "claw back" can be expected to occur eventually."*

The impacts of making an R&D claim remain in the franking account and even if a company's shareholders are not immediately impacted then it is likely over the medium term that a dividend will be paid that results in shareholders paying for the R&D Tax saving that was made at the firm level.

In order to try and assess the cost of the R&D Tax Incentive, we have compared the Government's budget data for 2012/13 for the R&D Tax Incentive obtained from the "Australian Government's 2014/15 Science, Research and Innovation (SRI) Budget Tables," and actual R&D expenditure as reported by companies in their R&D registrations from Innovation Australia's Annual Report 2013/14 (data used is for 2012/13). It is acknowledged that the data in Innovation Australia's (IA) Annual Report 2013/14 is not a fully accurate representation of what is represented in companies' tax returns, however it is the best publically available information of actual expenditure incurred. This comparison is shown in the table below:

Innovation Australia – Annual Report					
	Total Registrants	Percent of Companies Registering	R&D Expenditure (\$million)	Percent of Total R&D Expenditure	Additional R&D Tax Benefit (\$million)
Aggregate turnover < \$20 million (SME)	8,456	82.05	4,903	24.91	736
Aggregate turnover > \$20 million (large company)	1,850	17.95	14,785	75.09	1,478



<b>Total</b>	<b>10,306</b>	<b>100</b>	<b>19,688</b>	<b>100</b>	<b>2,214<sup>1</sup></b>
<b>Science, Research and Innovation Budget Data</b>					
Aggregate turnover < \$20 million (SME)			9,887	49.72	1,483
Aggregate turnover > \$20 million (large company)			10,000	50.28	1,000
<b>Total</b>			<b>19,887<sup>2</sup></b>		<b>2,483</b>

<sup>1</sup>The R&D Tax benefit has been calculated from the R&D Expenditure figures provided

<sup>2</sup>The R&D Expenditure figures for the Science, Research and Innovation Budget Data have been calculated from the budgeted cost.

The additional R&D Tax benefit received by companies was calculated as follows from the IA data:

- 15% of R&D Expenditure for the SMEs (calculated as 45% refundable R&D Tax Offset less the 30% corporate tax rate, for companies with an aggregate turnover of less than \$20 million); summed with
- 10% for the large companies (calculated as 40% non-refundable R&D Tax Offset less the 30% corporate tax rate, for companies with an aggregate turnover of greater than \$20 million).

This additional R&D Tax benefit was compared to the summed SRI additional R&D tax benefit budget data provided for:

- R&D Tax Incentive – Refundable; and
- R&D Tax Incentive – Non Refundable.

The information in the table above shows that the R&D Tax benefit from the IA data is \$2,214 million and for the SRI data is \$2,483 million. The SRI data is approximately 12.15% greater than the IA actual data.

Although the actual expenditure information in tax returns may be greater than that represented in the IA data, it is difficult to understand how the SRI budget data can be greater than the IA actual data, after taking the impact of franking credits into account. Given that the 1993 BIE data shows that up to 40% of companies were in a position of having shareholders impacted by having to pay additional tax, it appears that Treasury may not have appropriately accounted for the franking credit impacts of the R&D Tax Incentive.

We believe a significant risk exists that the SRI budget data presented by Treasury over estimates the cost of the R&D Tax Incentive by not appropriately accounting for franking credit impacts through to the shareholder level. This is a critical point because all R&D Tax Innovation policy is presented with the presumption that the R&D Tax Incentive has a high cost. We believe it is the driver for the \$100 million R&D expenditure cap recently legislated and proposed 1.5% reductions to the refundable and non-refundable R&D Tax Offsets.

As discussed above, it is accepted that there are circumstances where real costs of the R&D Tax Incentive exists, for example where there is significant foreign ownership of companies, or where start-ups/SMEs fail, however, over the medium term the impacts of franking credit elimination for Australian shareholders needs to be properly represented in Treasury modelling and government budgets.

It is also interesting that the IA data shows that of total R&D expenditure claimed, only 24.91% was claimed under the refundable R&D tax offset, while 75.09% was claimed under the non-refundable tax offset. Using this data 82.05% of companies claiming an R&D Tax Offset were only claiming 24.91% of the total R&D expenditure. A very different picture is represented in the SRI budget data for 2012/13, with an uncertain cause. Based on the IA data, it is likely that SMEs/start-ups claiming the R&D Tax Incentive are a small proportion of the total cost of the R&D Tax Incentive to Government.

This is an important point, given that SMEs/start-ups are the most likely firms to be induced to spend more on R&D as a result of accessing the R&D Tax Incentive, as a result of the capital constraints they experience.

### **Is the R&D Tax Incentive A “Super-Efficient,” Policy Tool to Generate Additional R&D Expenditure?**

We strongly agree with the BCA analysis of research undertaken by BIE in 1993, which stated that *“BIE research has suggested that managers tend to discount the effect of tax “claw-back” from shareholders through the dividend imputation system which suggests that the tax concession is indeed super-efficient.”*

The BIE stated that *“the public policy rationale for R&D assistance is that firms are unable to capture all the benefits of their R&D expenditure. (There are spill-overs as others learn new techniques from the firm doing the R&D without paying it for the privilege). Accordingly, without assistance, firms will under-invest in R&D. But assistance is not without its own costs. It requires more tax revenue to be raised elsewhere and this imposes its own costs on the economy. Thus, to the extent that the tax concession “fools” managers of firms into thinking that it provides more assistance than it does, the policy is super-efficient - it moves firms’ R&D decisions closer to the “right” amount from the economy’s perspective without fully incurring the cost of so doing. It gets something for nothing.”*

Our own anecdotal experience with the R&D Tax Incentive is similar to the BIE’s comments. We have been told by the management of companies that “it is just impossible to take the individual tax positions of shareholders into account with a number of shareholders, therefore we make tax decisions in the best interest of the firm.” It is not that senior management of firms are “fooled,” into believing that the additional benefit of R&D is worth more than it actually is, but that management make decisions in the firms interest due to the impossibility of taking the tax position of all shareholders into account.

The reasons behind the decisions are not important, however, what is very important is that managers remain induced to spend on R&D, despite shareholder impacts, which results in the R&D Tax Incentive being a “super-efficient,” policy tool.

Given the “super-efficient” nature of Australia’s R&D Tax Incentive versus other OECD countries, the removal or degradation of the current system would be an “own goal,” of historic proportions that would be gladly welcomed by competitor countries.

It should be noted that other policy tools such as direct grants and subsidies, which are not delivered through reductions in tax through the tax system, would not have these same “super-efficient,” attributes.

### **How are R&D Project Investment Decisions Made?**

Given recent comments made in the media by companies such as Google, it is important to understand how R&D project investment decisions are made within medium to large companies. This can be summarised as follows:

- Project investment decisions and other company financial decisions are based upon discount cash flow modelling (DCF modelling). Future cash-flows rather than accounting data is modelled;
- Tax and tax incentives are DCF modelled by companies (particularly medium/large corporates) in evaluating all significant project investment decisions. Tax outcomes do typically have a significant influence upon the outcomes of financial modelling, particularly those that have a cash-flow impact in the early years of a project, such as the R&D Tax Incentive;
- Significant potential projects are then ranked based upon the output of the DCF modelling; and
- Decisions are made regarding which projects to undertake.

It is important to note that although executives of companies like Google may claim in public that R&D investment decisions are not made based upon the availability of R&D incentives, it does not mean

that the financial modelling did not include the R&D Tax Incentive and that it was not a significant factor in a project to be undertaken.

It should be understood that executives are not necessarily aware of all the influencing factors within the financial model developed and are likely to accept that the output of financial models that have been reviewed by management are correct. While the R&D Tax Incentive may not have been specifically discussed at executive/board meetings as the main driver for undertaking a project, it does not mean that knowledge-intensive R&D projects were not approved relative to other potential projects, due to the impact of the R&D Tax Incentive within the financial modelling conducted.

Other decisions besides investment decisions are also driven by financial modelling. For example, companies make real world decisions such as “should I move my substantial R&D IT system development project overseas,” are also influenced by financial modelling that include cash-flow impacts such as the R&D Tax Incentive.

### **Foreign Investment in R&D Intensive Companies**

The government’s Tax Discussion Paper proposes that *“there remains an incentive for foreign equity to flow to companies with more tax concessions,” and that “these biases may be undesirable in an increasingly open and globalised world economy.”*

It seems an absurd proposition that the Government is unhappy with foreign capital flowing to companies that are undertaking R&D activities in Australia, as this capital will result in the development of jobs and industries that the Government purports to support in its IICA.

The R&D Tax Incentive legislation was written with specific changes from the R&D Tax Concession to enable multinationals to claim when the IP is held overseas. Roche stated in its submission to the Business Tax Working Group dated 13 August 2012 that using their FY2011 taxable income of \$27 million and an eligible R&D spend of \$42 million as an example, the R&D Tax Incentive would be worth more (\$4.2 million) to the company than a reduction of the company tax rate to 25% (\$1.4 million) and that as a direct consequence it is looking to do more R&D in Australia.

Roche also state that *“any R&D spend that the Roche (global) Group makes in Australia is local investment that would not have occurred otherwise. It results in not only additional economic activity but also non-economic benefits to Australia including: assisting with skilled workforce retention; providing opportunities for research and knowledge sharing; and allowing access to novel treatments for Australian patients.”* Roche also note the cost impacts of undertaking clinical trials in Australia, stating that *“in line with the findings from the 2011 Clinical Trials Action Group (CTAG) Report, Roche believes that Australia is becoming less competitive in its ability to attract clinical trials.”*

The benefit to the Australian Government from employment/consumption taxes from Roche undertaking more R&D in Australia, in addition to the GDP growth/general economic activity generated, would be worth substantially more to Australia than any “loss,” to Government revenue, generated through the conversion of franking credits that foreign shareholders were never going to be able to access, to reductions in company tax.

We believe the Government should view foreign investment in Australian resident companies, or foreign companies with permanent establishments, positively, given all the social and economic benefits that flow from the creation of highly skilled jobs in knowledge-intensive industries, rather than asserting the foreign shareholders are gaining some kind of unfair advantage by investing in companies operating in Australia with Australian based R&D activities. This is in fact the exact type of foreign investment that Australia needs more of and that will drive GDP growth in Australia.

### **Consideration of Alternative Approaches to the R&D Tax Incentive:**

Consideration is given in the government’s Tax Discussion Paper to alternative policy approaches as opposed to the R&D Tax Incentive. We strongly believe that the R&D Tax Incentive in its current form is the best policy approach to induce additional R&D expenditure in Australia. We do however believe some changes could be made to better target the R&D Tax Incentive, which is outlined in the next section. Our reasons are detailed below:

- As discussed above, Australia has a “super-efficient,” R&D Tax system as a result of dividend imputation. BIE research supports the fact that firms make tax decisions without consideration of the impacts for shareholders, therefore, industry R&D investment is maximised at the minimum cost to the government. This “super-efficient,” approach to stimulating R&D investment in Australia is only available through providing R&D benefits through the tax system;
- We consider that the government needs to use the competitive advantage of its dividend imputation system and ability to reduce the overall cost of the R&D Tax Incentive in a strategic manner, to induce additional R&D activity in a way that almost all other OECD countries are unable to, due to their different tax systems;
- The number of OECD countries with R&D Tax schemes has substantially increased in recent years. According to a European Commission report titled “A Study on R&D Tax Incentives (2014)” (European Commission report), R&D tax incentive schemes are widely adopted in advanced economies, including innovation leaders like the United States and Japan. Within the EU, only Germany and Estonia currently do not have a tax policy aimed directly at stimulating innovation. R&D funding in Germany is provided through a large number of public and private direct funding schemes, but even there the relative advantages of an R&D Tax Incentive scheme are advocated. For Australia to remain competitive, we need to strengthen our existing scheme;
- The European Commission report also states that “in the past fifteen years countries have shifted from tax incentives that only apply to increments in a firm’s R&D expenditure (incremental schemes) towards incentives that apply to total R&D expenditure (volume-based schemes). Currently, only seven countries have incremental tax incentives, usually in combination with a volume-based scheme, and for two of them - Ireland and United States - this design element is phasing out.” The Tax Discussion Paper discusses incremental schemes however the global trend is away from these schemes. In addition, the Australian R&D Tax Concession had a 175% Incremental R&D Tax Concession that involved complex calculations and did little to induce additional R&D expenditure;”
- Alternative proposed policy approaches involve government giving direct subsidies or grants. Direct grants or subsidies also have significant problems. For example, upon receiving a grant, a company is immediately taxed upon any grant money received, which reduces the value of the grant. Writing grant applications involves significant “transfer costs,” in the grant applicant receiving any benefit. For example, grants typically involve a competitive process where a company is not guaranteed to receive any benefit from its substantial time investment. Generally the success rate for grant processes are low and governments typically have poor records in “picking winners.” For SMEs/start-ups, many of whom do not have any grant writing experience, this would be much more onerous than the current system, which provides benefits with minimal additional compliance required above that already produced through a systematic R&D process. On the government side of the process, increased reliance on competitive grants would also lead to significantly increased costs because of the increased amount of review work required. As stated above, the value of grants cannot be “clawed back,” from shareholders in a manner that maximises R&D expenditure by firms;
- Government needs to consider changes to the UK’s R&D tax incentive in recent year to make the R&D tax credit program more generous, and introducing a Patent Box program even while the government faced a severe economic downturn resulting from the GFC. We support the introduction of a Patent Box in a format supported by the OECD, which would require a nexus to R&D undertaken in Australia. Similarly to the R&D Tax Incentive scheme, we believe it should be jointly administered by AusIndustry and the ATO; and
- As part of improving Australia’s international competitiveness, to attract foreign investment it should consider changes to the tax system to incentivise new foreign investment in R&D intensive industries in Australia. We consider that this is best done at the firm level due to the reasons stated above that management does not fully consider tax implication through to shareholders. For example, the existing pre-approval system of “overseas R&D activity,” could be used to grant additional tax incentives to foreign companies without a current presence in Australia that are willing to setup new research facilities or hubs in Australia. Given that Australia has strong regional competitors, such as Singapore, that are willing to grant tax holidays and assist companies with capital setup costs, a pre-approval system similar to that for “overseas pre-approval,” could be considered, which would allow the Government control of expenditure from the scheme.

### **Better Targeting of R&D Tax Incentive Benefits:**

We see a number of opportunities to better target the R&D Tax Incentive towards firms that we believe are the most responsive to R&D tax benefits, in terms of being induced to spend more on R&D activities. For example:

- Focus on SMEs/start-ups, as they are responsive to the R&D Tax Incentive;
- Create a “super R&D refundable tax offset,” for small businesses with a turnover of less than \$2,000,000 with R&D expenditure amounts capped at \$2,000,000;
- Provide a new tax incentive, such as the UK’s Patent Box scheme, for knowledge-intensive industries such as those identified by the IICA. Patents should have a nexus to previous R&D undertaken in Australia;
- The current legislation limits collaboration and spin-offs out of universities, with tax exempt ownership, from accessing the refundable R&D tax offset. Existing legislation also prevents tax exempt entities from claiming, however, some of these entities are conducting very high quality research and should be supported through the R&D Tax Incentive. Rules need to be changed to increase the threshold for tax exempt entity ownership percentage and thus increase access to the R&D Tax Incentive;
- Improve collaboration between companies and universities by increasing the additional benefit of the R&D Tax Incentive for Research Service Providers (RSP) expenditure;
- Increase the ability of Australian companies/permanent establishments to compete to provide contract R&D services to foreign companies. Currently there is a requirement that the Australian entity needs to be related to the foreign entity. We believe that where the foreign entity is unable to claim, the Australian based entity should be able too. This will enable Australian companies to access the R&D Tax Incentive in a broader range of circumstances and be more price competitive in attracting foreign R&D work; and
- The \$100 million R&D expenditure cap should be removed for specific knowledge-intensive industries that have been deemed “potential winners,” by government in its IICA. Foreign jurisdictions do not have these expenditure caps and it will forever limit the success of the “potential winners,” identified in the government’s IICA.

### **Stability of the Program:**

The value of a stable R&D Tax Incentive regime to industry needs to be understood. After significant changes to the R&D tax system in recent years, increasing the sovereign risk of investing in knowledge-intensive industries in Australia needs to be considered. A stable R&D Tax environment, where the Government accepts the benefits produced by the scheme and does not continually seek to undermine the value, produces a stable environment where industry feels more secure investing knowing that the ground rules are not going to be changed.

Other OECD countries that have a greater debt/GDP ratio than Australia have maintained or increased the generosity of their R&D Tax credit programs, as they understand that they are in a competition to attract highly skilled jobs and knowledge-intensive industries. For example:

- In recent years the UK has substantially increased the value of its R&D Tax credit scheme while simultaneously reducing its corporate tax rate;
- Singapore has an already low corporate tax rate and in recent years has introduced an attractive R&D Tax scheme based upon the old Australian R&D Tax Concession legislation, but more generously weighted towards SMEs/start-ups; and
- Japan and the Netherlands both introduced temporary increases to existing R&D Tax Incentives to help companies overcome the fiscal effects of the GFC.

The government needs to understand that post the mining boom, Australia’s opportunities lie in developing knowledge-intensive industries involving substantial intangibles such as IP. However, what is also important is that all OECD countries are competing to host these industries and related jobs. The government has commented in its recently released budget that now is the time to “have a go,” in terms of starting a business, but the government also needs to “have a go” through supportive industry innovation policy development, at making Australia genuinely competitive in terms of the

attractiveness for innovative SMEs/start-ups to take risks in Australia, versus setting up operations with regional competitors.

## **Conclusion:**

We have raised a number of points in our discussion above regarding whether the R&D Tax Incentive does encourage additional R&D to be undertaken that would not be conducted without Government support and evaluated alternative approaches. As stated above, we believe that the R&D Tax Incentive is the best program for Australia to achieve the Government's objectives and have stated minor modifications that we believe would enable an even greater return. We have provide a summary of key points below:

- While we understand the focus of this review is evaluating whether “the R&D tax incentive encourages companies to conduct R&D activities that would otherwise not be conducted in the absence of Government support,” we believe that the benefits of the R&D tax incentive are much broader than companies undertaking additional R&D activities that would not be undertaken in the absence of government support, and that these additional benefits will only increase over time, as competition between economies to host highly skilled/knowledge-intensive industries (technology focussed) increases and labour/capital becomes increasingly globalised;
- The object of the R&D Tax Incentive should be re-written to align with the Government's recent IICA, recognising the increasingly globalised competition Australia faces to host highly skilled/knowledge-intensive industries and the R&D Tax Incentives' role in creating and maintaining these jobs/knowledge-intensive industries in Australia. The object needs to recognise the real role the program delivers in increasing Australia's competitiveness enabling highly skilled/knowledge-intensive jobs and industries to be created and maintained in Australia;
- Value for SMEs of the refundable R&D Tax offset is significant, as companies with tax losses receive cash and many early stage growth companies have used this benefit to continue funding R&D, which includes salary costs and transitioning to commercialisation of a project, thus creating new tax streams for the economy;
- Government should focus on SMEs/start-ups, as they are responsive to the R&D Tax Incentive;
- Government should create a “super R&D refundable tax offset,” for small businesses with a turnover of less than \$2,000,000 with R&D expenditure amounts capped at \$2,000,000;
- Australia is essentially the “lucky country,” within the OECD as its dividend imputation system enables it fund R&D at the firm level which is subsequently repaid by shareholders. We believe that the costs of funding the R&D tax incentive are significantly less than generally understood as a result of the nature of the Australian taxation system, due to the existence of dividend imputation and resulting franking credit impacts;
- The evaluation of the effectiveness of the R&D Tax Incentive should be made with consideration of the total benefits produced by the program, taking the real cost of the program into account (including franking credit impacts at the shareholder level), rather than a purely economic/econometric narrow evaluation of whether additional R&D expenditure is generated;
- Our anecdotal experience supports the BCA's contention that R&D Tax regimes in Australia are “super-efficient” in generating returns, due to franking credit implications reducing the cost of the scheme in Australia, and firms making R&D investment decisions without considering the flow through franking credit impacts at the shareholder level. This is a significant competitive cost advantage for the government in funding industry R&D that is almost unique to Australia within the OECD. Given the “super-efficient” nature of Australia's R&D Tax Incentive versus almost all other OECD countries, the removal or degradation of the current system would be an “own goal,” of historic proportions that would be gladly welcomed by competitor countries;
- The government needs to be less concerned with the cost of the R&D tax Incentive and proposed schemes such as Patent Box, particularly given Australia's dividend imputation system, and more concerned with improving the program to develop knowledge-intensive industries, associated jobs and employment/consumption taxes;
- The value of the R&D Tax Incentive in maintaining existing knowledge-intensive industries and SMEs/start-ups in Australia needs to be understood, particularly given the presence of

strong regional country competitors, with generally lower business costs and their own R&D tax regimes favouring SMEs/start-ups;

- The government's focus needs to be on "getting business in the door," in terms of developing a tax innovation policy that enables Australia to effectively compete with OECD countries and other strong regional regimes;
- Our anecdotal evidence is that different industries and segments of the Australian economy react differentially to the additional tax benefit provided by the R&D Tax Incentive. We believe that substantial additional R&D expenditure is generated through the R&D tax incentive by SMEs including start-ups and intensive knowledge development industries, versus the rest of the Australian economy;
- It is likely that the Government could achieve increases in Value for Money of the R&D tax incentive by better targeting it for SMEs/start-ups and large intensive knowledge development industries. The \$100 million expenditure cap should be removed for specific knowledge-intensive industries that have been deemed "potential winners," by government;
- We agree with the Government's ICAA that it is necessary to "*adjust tax and research funding mechanisms to provide greater incentives for collaboration between research and industry.*" Better targeting of the R&D Tax Incentive should also include a relaxation of certain R&D Tax Incentive rules that limit the ability of universities to collaborate with the private sector, successfully spin out and maintain control of R&D companies and enable Australian companies to compete internationally to undertake R&D in Australia on behalf of unrelated foreign entities. The additional R&D tax value of claiming the R&D Tax Incentive should be increased for engaging RSPs;
- We support the development of Patent Box on the basis that it follows the current approved OECD guidelines that there is a required nexus to the R&D tax scheme. We believe it is the correct approach to encourage R&D to be conducted in Australia regardless of whether the IP is legally held in Australia or overseas. However, similarly to other Patent Box schemes, the commercialisation of IP should be Australian-based; and
- Since the BIE publication, there has not been a substantial amount of research in Australia relating to the specific question of whether the R&D Tax Incentive does generate additional R&D expenditure that would not occur without government support. There is a need for government funded quality independent research to be undertaken.



To whom it may concern,

My name is Ayrton Sue and I am the Managing Director of Element Engineering Australia Pty Ltd (EEA). Currently the primary business of EEA is the provision of mechanical engineering services, including design, analysis and certification services. I am a qualified mechanical engineer, but initially trained and worked as a boiler maker. I also have a strong interest and knowledge of electronic engineering and software development.

For the past 3 and a half years my company has also been involved in mining services technology research and development (R&D) of a vehicle performance management system (VPMS). This product is best described as the "internet of mining information," as it has involved the development of both a wireless hardware electronic device (Wi-Fi and satellite enabled) that is able to be fitted to mining equipment to obtain vibration, acceleration and other vehicle information, and a highly configurable web based software system that receives the information transmitted and performs evaluations.

Different types of analysis is able to be performed by mining companies, which involves interrogating the data to enable predictions to be made in relation to wear and tear, and required maintenance. Currently no product exists worldwide that is able to collect data in real time from mining equipment, and transmit it wirelessly to the web software developed for evaluation. My product will also have applicability to other sectors where vibration and equipment movement impacts maintenance expenditure, for example manufacturing and transport.

The potential cost savings of real time analysis of data in terms of predicting required maintenance and other operational savings have been calculated to be in the tens of millions range for large mine sites. I believe that the use of new high technology products in mining will be critical to reducing costs and improving productivity in the mining sector in the future. I also believe that the development of my product demonstrates that high technology mining services products can be developed in Australia including hardware electronics and software. It should be noted that my product is equally applicable to overseas environments and would have an international market.

I have undertaken trials of my product with major miners and have received positive feedback. I have recently finalised the development of a new range of prototypes, begun applying for patents and am hopeful of commercialising my product in the near future.

I have claimed the R&D Tax Incentive for EEA using specialist R&D tax consultants for the 2012/13 and 2013/14 income years. The funding for my R&D activities has been both through my existing mechanical engineering design business and the R&D Tax Incentive. Due to the downturn in the engineering services industry, the funding provided the by 45% refundable tax offset has been critical in allowing me to further develop my product. I would not have been able to fund further R&D in 2013/14 without the R&D Tax Incentive and I believe that EEA may not have survived without this critical early stage funding.

The importance of the R&D Tax Incentive to small innovative start-up companies and SMEs should not be underestimated by Government. The most critical feature of the R&D tax incentive is its refundable nature in that it gives cash back to companies in a tax loss position, which enable further R&D activities to be conducted that would not have occurred otherwise. The funding also enables innovative companies to begin the process of commercialisation, for example beginning the process of applying for patents to protect EEA's intellectual property (IP), which EEA would also have been unable to undertake without the support of the R&D Tax Incentive.

The funding provided by the R&D Tax Incentive has enabled me to:

- Further develop the hardware design and prototypes;
- Further develop the software required for the product;



- Undertake trials of the product with a major miner;
- Engage IP lawyers and being the patent process; and
- Conduct overseas trips to meet with various parties regarding the product.

This is additional R&D and commercialisation work that would not have been conducted without the R&D Tax Incentive.

I also believe the R&D Tax Incentive has provided me with a number of non-financial benefits. For example, I engaged a specialist R&D Tax consultant, RSM Bird Cameron, who has provided me introductions to:

- Other experienced professionals, such as patent attorneys;
- Innovation networks; and
- Potential future funding sources.

It is likely that I will obtain further commercialisation training through the Western Australian Government supported Ignition program as a result of these introductions and will lodge patents. Having an R&D Tax consultant that is strongly involved in the innovation/IP community in Western Australia that has been able to make a number of introductions, has been of great benefit and has contributed to my success to date. The Government should also consider these non-financial contributions in evaluating the R&D Tax Incentive, such as the increased networking and collaboration between companies and institutions that ultimately leads to the commercial success of innovative technologies.

The second point of the Government's Tax Discussion Paper relates to whether there are alternative approaches to the R&D Tax Incentive that could better achieve the objective of inducing additional R&D expenditure. Through engaging a specialist R&D Tax consultant I have found the process to be a simple way to access non-competitive R&D funding from the Government on a self-assessment basis. Other approaches such as grant programs are always competitive and require substantial effort without any guaranteed benefit for the company. It is my belief that for a technology focussed SME, the decision regarding whether to spend substantial time writing lengthy grant applications that often have limited chances of success, or focus on the product development, will generally result in these companies not applying for grants.

Although the R&D Tax Incentive does require small innovative companies to fund the initial year's research prior to obtaining any cash rebate from the Government, the prior year's R&D expenditure does fund subsequent year's R&D and unquestionably accelerates the development program. Therefore, it is my strong belief that an R&D Tax Incentive based upon self-assessment, without the competitive restrictions and time consuming application process of grant programs, is the best method of inducing additional R&D expenditure from SMEs in Australia.