

Regulation impact statement:
Better targeting the Research and
Development Tax Incentive

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1. Background

Innovation is an important driver of productivity and economic growth, and R&D is an important input to innovation. The economic impact of business investment in R&D, however, goes beyond the benefits accruing to the firm undertaking the R&D and spills over to other firms and the economy as a whole. Businesses may also have difficulty obtaining finance due to the uncertain returns from R&D activities. As a result, international research (including by the OECD) has found that firms typically underinvest in R&D relative to what is socially optimal.

The underinvestment by business in R&D represents a market failure and has been recognised internationally as justification for government intervention. In Australia, the Government primarily supports increasing investment in business R&D through the R&D Tax Incentive (R&DTI). While a socially optimal investment level is a theoretical construct and therefore unable to be quantified, an increase in business investment in R&D is likely to represent a positive movement towards the optimal level.

The R&DTI program is the largest component of Australian Government support for innovation. In the 2016-17 year, over 15,000 R&D-performing companies registered. According to the 2017-18 Science, Research and Innovation Budget tables, the estimated cost of the R&DTI program is around \$3 billion in 2016-17.

2. The problem

Current government support for R&D does not fully meet its objectives

The National Innovation and Science Agenda was launched on 7 December 2015. When launching the Agenda, the Government committed to undertaking a review of the R&D Tax Incentive (the Review).

The Review was conducted by a Review Panel comprising Mr Bill Ferris AC (Chair of Innovation Australia), Dr Alan Finkel AO (Chief Scientist) and Mr John Fraser (then Secretary of the Department of the Treasury). The Review Panel was supported by an interdepartmental taskforce comprising officers from the Department of Industry, Innovation and Science (DIIS), the Treasury and the Australian Taxation Office (ATO).

The Review Panel, drawing on work conducted by the Centre for International Economics (CIE), found that the R&DTI falls short of meeting its stated objectives of additionality – encouraging R&D investment that would not occur in the absence of the program – and spillovers. The panel identified a number of areas where improvements could be made in order to improve the effectiveness and integrity of the program and achieve a stronger focus on additionality.

On 30 January 2018 Innovation and Science Australia (ISA) released its report to the Government, *Australia 2030: Prosperity through Innovation* (the ISA 2030 Plan). The ISA 2030 Plan included alternative recommendations to reform the R&DTI.

In the 2018-19 Budget, the Government announced reforms to the R&DTI. The reforms respond to the Review of the R&DTI, and also considered the recommendations for reform in the ISA 2030 Plan. It was also informed by the considerable stakeholder feedback it had received over a two year period since the Review report was first released.

Inherent difficulties in measuring program effectiveness

The intended outcomes of the R&DTI – additionality and spillovers – are very difficult to quantify and necessitate costly analysis that relies heavily on anecdotal and qualitative evidence.

In their program evaluation the CIE stated that:

The two most crucial elements of the R&D TI (additionality and spillovers) turn out to be extremely difficult to empirically measure and evaluate.

Additionality cannot be directly measured and must be inferred through interviews, surveys, statistical analysis and modelling. Therefore, estimates of additionality will always be imprecise and subject to uncertainty.

Spillovers, while in principle evident from the techniques of growth accounting, have also proved to be extremely difficult to measure empirically.

Despite the difficulties noted above, the CIE attempted to measure additionality levels in Australia using a mix of survey data and statistical analysis. DIIS also commissioned the Centre for Transformative Innovation at Swinburne University to undertake an econometric analysis evaluating the level of program additionality.

The analyses found results broadly consistent with studies from other countries (0.3 to 1.5 additional dollars of R&D per dollar of tax forgone for CIE, and 0.8 to 1.9 for Swinburne). There is also common agreement that additionality is greater for small companies than large companies.

A key finding of the Review and the CIE is that, at a conceptual level, the program's volume based design (i.e. all R&D attracts the same benefit) is poorly targeted towards additional R&D.

The most recent estimate of spillovers in an Australian context was presented by the Productivity Commission (the PC) in 2007. The PC estimated that a 1 per cent increase in market R&D led to approximately 0.02 per cent increase in productivity or 65 cents of average spillover benefit from each dollar of R&D conducted.

There is limited data in relation to spillover benefits and it is not expected that the reformed program will assist in overcoming these measurement issues.

3. Case for government action/objective of reform

Businesses generally invest less in R&D than is socially optimal due to their inability to fully appropriate the returns; the inherently risky nature of R&D activities; and the related uncertainty around their outcomes. There is a widely agreed role for government intervention to address this market failure and encourage additional R&D.

The Review found that the current R&DTI – the largest component of government support for R&D in Australia – falls short of meeting its objectives of encouraging additionality and spillovers. Reform of the R&DTI is required to ensure the efficacy and cost-effectiveness of the program. The OECD has found that 'basic research' (i.e. experimental or theoretical work undertaken primarily to acquire new knowledge of the underlying foundation of phenomena and observable facts, without any particular application or use in view) results in larger spillovers than applied research (i.e. experimental or theoretical work directed primarily towards a specific practical aim or objective).

There is, however, no evidence that specific industries or types of R&D produce additionality and spillovers in greater amounts than other industries or types of R&D. Therefore it is important that the R&DTI is industry-neutral, aiming to incentivise novel R&D irrespective of the type of R&D or the

sector. This is catered for under the R&DTI through the broad definition of what constitutes eligible R&D.

The Review found a relatively low level of additionality under the current R&DTI, stating that “volume-based tax instruments such as the Incentive not only subsidise this additional R&D but also support the activities a company would have done anyway.” That is, the program provides the same level of support for all eligible R&D activities undertaken by a claimant, with no requirement to demonstrate that it is additional to ‘business-as-usual’ R&D that would have been progressed in the absence of government support.

The Review found that the program design could be improved by reducing support for business-as-usual activities and refocusing support towards additional R&D, particularly in the non-refundable portion of the program (available to larger businesses with \$20 million or more turnover per annum).

The Review recommended improving the R&DTI’s additionality for larger businesses by redirecting government support to R&D intensive companies – R&D intensity was defined as R&D expenditure as a proportion of total business expenditure. Compared to companies with lower R&D intensity, these claimants make more efficient use of scarce R&D resources such as skilled labour and specific capital equipment and are more likely to be induced to increase their investment in R&D (i.e. generate increased additionality and thus produce greater spillover benefits). It is also acknowledged that most companies will undertake some R&D to keep up with competitive pressures and additional R&D will necessarily fall into higher intensity bands.

The Review found that although the R&DTI provides effective support for small and medium-sized enterprises (SMEs) via its refundable component (available to companies with annual turnover below \$20 million), the significant growth in the number of SMEs participating in the program since its introduction is placing upward pressure on program costs. The Review recommended keeping the rate of benefit unchanged, but capping cash refunds for refundable R&D tax offset claimants as a way of placing some restraint on the maximum level of payment that can be made (SMEs can currently ‘cash out’ their entire R&D tax offset if they are in a tax loss position).

In order to exceed a cap, companies would need to be spending very large amounts on R&D. Companies spending large enough amounts on R&D to be impacted by a cap are sophisticated businesses who are likely to have access to other sources of finance in addition to the R&DTI to support their R&D activities. As the Review put it, *“Refundability is likely to provide fewer tangible benefits for SMEs with larger R&D expenditures, who will be able to find alternative sources of finance at relatively lower costs in comparison with firms with lower R&D expenditure.”*

The Review also noted that *“...as the tax offsets under the program are at a fixed level, they are relatively more valuable when the company tax rate is lowered (in comparison to the deduction received for normally deductible expenses). Hence, the fixed level of the tax offset should always be calibrated to the level of the company tax.”*

The CIE’s, and other studies have shown that the most responsive companies are often cash constrained R&D start-ups, SMEs, and R&D-intensive companies (those companies whose core business is R&D-centric). These companies generally devote a greater proportion of their activities to R&D.

4. Policy options

This regulation impact statement compares the Government's announced reforms to two other potential responses to the Review: 1) no policy change; and 2) adopting the Review recommendations.

Option 1: No policy change

If the Government took no action the R&DTI would continue in its current form. The program currently has two core components:

- a 43.5 per cent refundable tax offset for eligible entities with a turnover of less than \$20 million per annum; and
- a 38.5 per cent non-refundable tax offset for all other eligible entities. Unused non-refundable offset amounts may be able to be carried forward to future income years.

The \$100 million expenditure threshold would be maintained.

In the absence of the R&DTI, companies would deduct their expenses at the relevant standard company tax rate (from the 2018-19 income year onwards, 27.5 per cent for businesses with annual turnover less than \$50 million and 30 per cent for all other businesses). If a company was in tax loss, however, they would not receive any immediate benefit.

The net benefit provided by the R&DTI is the difference between the R&D offset rate and what the company would otherwise receive in the absence of the program (i.e. the value of the standard tax deduction). These rates can be seen in **Table 1** below.

Table 1: R&DTI Net Benefit Rates, 2018-19

Annual Turnover	Company Tax Rate (%)	R&DTI Offset Rate (%)	Net Benefit
0 - \$20m (Unprofitable)	0	43.5	43.5 cents
0 - \$20m (Profitable)	27.5	43.5	16 cents
\$20m - \$50m	27.5	38.5	11 cents
\$50m and above	30	38.5	8.5 cents

Under the refundable tax offset, where a company's tax liability is smaller than the value of the R&D tax offset they may receive the full offset as an immediate cash refund rather than carrying it forward to future income years.

Option 2: R&DTI Review Recommendations

The Review Panel found that the program does not fully meet its stated policy objectives and proposed a range of recommendations to improve its effectiveness and integrity. The recommendations include initiatives to encourage additional R&D. The Review's recommendations are summarised in **Table 2** below.

Table 2: Review recommendations

Rec	Detail
1.	Retain the current scope of eligible activities and improve guidance to registrants.
2.	Introduce a collaborative premium of up to 20 per cent for the non-refundable tax offset to provide additional support for the collaborative element of R&D expenditures undertaken with publicly-funded research organisations. <ul style="list-style-type: none"> - The premium would also apply to the cost of employing new STEM PhD or equivalent graduates in their first three years of employment. - Companies falling below the intensity threshold should still be able to access both elements of the collaboration premium.
3.	Introduce a cap on the annual cash refund (in the order of \$2m) with remaining offset treated as non-refundable offsets and carried forward.
4.	Introduce a 1-2 per cent R&D intensity threshold for the non-refundable element, such that only R&D expenditure over the threshold attracts a benefit. Intensity is defined as the proportion of R&D expenditure over total expenditure.
5.	If an R&D intensity threshold is introduced, increase the R&D expenditure threshold from \$100m p.a. to \$200m p.a.
6.	Investigate options for improving the administration of the R&DTI (e.g. adopting a single application process; developing a single program database; reviewing the two-agency delivery model; and streamlining compliance review and findings processes, publishing annually the names of companies claiming the R&DTI and the amounts of R&D expenditure claimed) and additional resourcing that may be required to implement such enhancements. To improve transparency, the Government should also publish the names of companies claiming the R&DTI and the amounts of R&D expenditure claimed.

Option 3: Targeted reforms to the R&DTI (preferred option)

The Government's option, announced in the 2018-19 Budget, comprises targeted reforms to the R&DTI including;

- a \$4 million cap on cash refunds with an exemption for clinical trials;
- an R&D Premium that rewards companies for conducting high intensity R&D;
- an increase in the R&D expenditure threshold from \$100 million to \$150 million;
- linking the R&D tax offset rate to the prevailing company tax rate;
- introducing a new power for ISA to make 'general determination'; and
- changes to integrity provisions in the tax legislation to cover the R&D tax offsets.

The changes would apply for income years starting on or after 1 July 2018.

The reforms include a \$4 million annual cap on cash refunds for R&D claimants with aggregated annual turnover less than \$20 million. Amounts in excess of the cap would become a non-refundable tax offset to be carried forward into future income years. Expenditure on clinical trials would be excluded from the \$4 million cap on cash refunds, recognising the critical role of clinical trials in developing life changing drugs and devices.

The reforms refocus support for larger companies (with annual turnover of \$20 million or more) to those with higher R&D intensity, while continuing to provide a baseline level of support for companies with lower R&D intensity through a new R&D Premium. The R&D Premium provides

multiple rates of non-refundable R&D tax offsets, increasing with the intensity of companies' R&D expenditure.

The current \$100 million expenditure threshold would be increased to \$150 million. The higher expenditure threshold encourages large companies to spend more on R&D, as a greater proportion of their R&D expenditure will be eligible for the R&DTI incentives.

See **Table 3** for the rates of benefit provided by the R&D Premium. **Box 1** provides an example of how the R&D Premium would operate in conjunction with the increased expenditure threshold.

The rates of the R&D tax offsets would be linked to each claimant's company tax rate, removing the need for ongoing legislative amendment of R&DTI tax offset rates as company tax rates change (see **Table 3**). This ensures that companies receive a fixed premium (above the value of a standard tax deduction) for R&D expenditure as the Government's corporate tax cuts take effect.

Table 3: The new R&DTI tax offsets

R&DTI Tax offset	Rate of offset
Refundable R&D Tax offset (companies with turnover less than \$20 million)	The claimant's tax rate for the year plus 13.5 percentage points
Non-refundable R&D Tax offset (companies with turnover of \$20 million or more)	The claimant's tax rate for the year, plus: <ul style="list-style-type: none"> • 4 percentage points for R&D expenditure between 0 per cent and 2 per cent R&D intensity (inclusive); • 6.5 percentage points for R&D expenditure above 2 per cent to 5 per cent intensity (i.e. not including R&D expenditure falling within the first 2 per cent of the claimant's total expenses for the year) ; • 9 percentage points for R&D expenditure above 5 per cent to 10 per cent intensity (i.e. not including R&D expenditure falling within the first 5 per cent of the claimant's total expenses for the year) ; and • 12.5 percentage points for R&D expenditure above 10 per cent intensity (i.e. not including R&D expenditure falling within the first 10 per cent of the claimant's total expenses for the year).

Box 1 - How would the expenditure threshold work with an R&D Premium?

For a given income period, if Company A has a total business expenses of \$5 billion and eligible R&D expenditure of \$350 million, the company has a 7 per cent R&D intensity (\$350 million / \$5 billion). Under existing policy settings, the company would receive the 38.5 per cent non-refundable R&D tax offset on the first \$100 million of R&D expenditure and a 30 per cent offset for the remainder (\$250 million), resulting in a total non-refundable tax offset of \$113.5 million.

Under the R&D Premium with an associated increase of the expenditure threshold to \$150 million, the first \$100 million (2% of \$5 billion) would attract an offset of \$34 million (34 per cent x \$100 million). The next \$50 million would be eligible for an offset of \$18.25 million (36.5 per cent x \$50 million). The remaining amounts (\$200 million) will receive an offset at the prevailing company tax rate. The resulting tax offset would be \$112.25 million.

The ISA Board would have the power to publish 'general determinations', which would be binding on the ISA Board. The general determinations would provide guidance on the circumstances in which the Board can exercise its powers or perform its functions or duties in relation to the R&DTI.

The targeted reforms would also improve the integrity of the R&DTI by strengthening anti-avoidance rules, publishing claimant details and amounts of R&D expenditure claimed and improving guidance to help ensure that taxpayers do not make incorrect claims.

5. Impact analysis of each option

In order to receive a benefit under the R&DTI, companies must go through a two stage process: registering R&D activities with the Department of Industry, Innovation and Science (DIIS); and then claiming related expenditure through their annual tax return by filling out an R&D Tax Schedule with the Australian Taxation Office. The activities associated with the registration and claiming processes comprise the R&DTI's regulatory costs. As with the rest of the taxation system, over 80 per cent of companies that register for the R&DTI use consultants to assist with their applications. The fees paid to these consultants impose a regulatory burden on registrants, and are therefore considered when determining the regulatory costs of the different options.

Option 1: No policy change

Under this option, no action would be taken by the Government and the current R&DTI continues unchanged. There is therefore no change to the regulatory cost of the program.

Benefits

The benefit of this option would be that there is no increase in regulatory burden.

Costs

The cost of this option would be that the Government continues to provide support to 'business-as-usual' R&D which would likely have been conducted anyway (i.e. in absence of the program). The R&DTI would continue to fail to fully meet the program objective of encouraging greater additionality in R&D activities to the detriment of the economy.

There would also be a risk that growth in the number of companies in the program could place upward pressure on program costs, without an attendant increase in additionality.

Program costs will also continue to rise as the Government's company tax cuts come into effect. Without changes to offset rates, the lower company tax rates increase the effective benefit of the R&DTI and the resulting cost to government.

Option 1 - Net outcome

While there would be no change to the regulatory burden on business, the identified deficiencies in the efficacy of the program would continue, limiting the economic benefits and cost effectiveness of the R&DTI.

Option 2: R&DTI Review Recommendations

This option would implement the recommendations of the Review without any alterations.

Benefits

Introducing a minimum R&D intensity requirement would target support towards companies that are the most significant participants in Australia's R&D landscape. As the benefit would not be provided for R&D expenditure under the threshold (the Review found that at least such a level of expenditure would be expected as business as usual in a truly innovative company), the intensity threshold is more likely to direct support to companies investing in additional R&D.

Companies below the threshold would no longer be eligible to receive a benefit under the program, which reduces the overall administrative burden. This is due to fewer companies needing to complete the registration process and separately account for related expenses, therefore removing the need for associated record keeping and compliance-ready measures.

The Review also recommended that the \$100 million expenditure threshold should be increased to \$200 million. The higher expenditure threshold, when combined with the intensity threshold, would likely sharpen the additionality of larger companies. This is because the select few companies in a position to benefit from the higher expenditure threshold would be able to register more R&D activities in order to receive the greater benefit. The increased expenditure threshold therefore supports the program's purpose of driving additionality.

A \$2 million cap on cash refunds would constrain the costs of the refundable R&D offsets under the program by limiting the most costly element of the program. These companies were found by the Review to be the most responsive to the inducement on offer and the most likely to reinvest the support provided into additional R&D.

The introduction of a collaboration premium would support greater collaboration with publicly funded research organisations (PFROs). This in turn, would increase the potential for significant knowledge transfer and wider benefits to the economy. However, factors such as cultural differences between industry and universities and difficulties in navigating university processes over intellectual property (IP) would remain significant inhibitors of collaboration. As with the volume based nature of the R&DTI, additional support would be offered for the significant amount of collaborative R&D activity already underway at no additional benefit to the tax payer.

Costs

The introduction of an intensity threshold in isolation is estimated to deny an R&DTI benefit to those claimants with intensities less than 1 or 2 per cent. Conceptually the companies falling below the threshold would be more likely to be undertaking business as usual R&D than additional R&D. As this R&D is expected to continue without Government support, R&D activity for these companies is expected to remain relatively stable.

A \$2 million refund cap may deter some start-ups from investing in additional R&D and could significantly impact the development of new innovative start-up companies in Australia. The biotech and medical industries would be particularly affected. These industries are generally very R&D intensive, with long term R&D projects that require large amounts of persistent capital and financing. The industry frequently incurs large expenses before any returns on investment are made. There is often a long time between the initial R&D and commercialisation due to the rigorous safety and efficacy testing requirements required for new medications and medical devices. The \$2 million cap could force clinical trial activities offshore as the cash refund cap would limit cash flow.

The collaboration premium may be limited in its ability to effectively increase the level of collaboration. While the collaboration premium would reward companies for collaborating with publicly funded research organisations, it would not address the significant cultural and structural barriers to collaboration. A collaboration premium also creates the potential for distortionary impacts and rorting. For example, a company with the internal capability to undertake R&D may choose to outsource the activity simply to receive a higher benefit rate. This would not be an efficient allocation of resources.

Option 2 - Net benefit

The net result would be lower regulatory costs for the program, largely driven by changes that effectively exclude companies from accessing the program.

The intensity threshold precludes a significant number of non-refundable claimants from accessing the R&DTI. As these companies would no longer be required to register their R&D activities or complete the R&D schedule to their tax return, their regulatory burden is reduced.

The \$2 million refund cap proposed by the Review is significantly more restrictive than the \$4 million refund cap included in the targeted reforms to the R&DTI (Option 3) and would be expected to adversely impact smaller companies with significant, longer term investments in R&D, including biotech, medtech and life science companies.

The design elements of the collaboration premium – such as the specific definition of ‘collaboration’, the eligibility criteria and the claiming process – were never elaborated upon by the Review. While the measure proposes a premium rate for collaborative R&D, those activities are already eligible under the current program arrangements. The regulatory impact would merely require separating out the related expenses, however this is likely to occur already as through contract agreements (it would be highly unusual not to given intellectual property is being created). As a result, the regulatory impact from the measure is believed to be negligible.

Regulatory costings for the Review recommendations are lower than the Option 3 reforms as a result of companies being excluded from the program, which reduces registration, record keeping and audit costs for these companies.

This option would result in an estimated total average annual regulatory saving for businesses of \$16.1 million.

Table 4: Regulatory burden estimate (RBE) table (Option 2)

Average annual regulatory costs (from business-as-usual)				
Change in costs (\$ million)	Business	Community organisations	Individuals	Total change in cost
Total, by sector	\$16.1 save	Nil	Nil	\$16.1 save

*Average annual impact (calculated over 10 years).

Option 3: Targeted reforms to the R&DTI (preferred option)

Under this option, the government’s targeted reforms to the R&DTI would be implemented.

Benefits

Introducing an R&D Premium would target support towards companies that are the most significant participants in Australia’s R&D landscape. R&D intensive companies are considered to be more

responsive to fiscal incentives intended to support R&D. Focussing on these companies would better target the program's focus on additionality and spillovers while also helping to constrain its cost.

Some large companies will have their R&D claim reduced, resulting from the reduction in the level of support for R&D expenditure that is more likely to be business as usual. The level of support will be increased for R&D that is more likely to be additional. The reduced support for business as usual R&D and increased support for additional R&D expenditure is expected to improve the additionality of the program.

Although companies are expected to have some response to the reduction in their overall support, their response may be quite small. This is because the reduction in support is for R&D expenditure that is likely to be business as usual – that is, likely to be conducted even in the absence of the program.

There are a number of distinct benefits of targeting the program towards R&D intensive companies. The Review found R&D intensive companies are more likely to:

- use R&D inputs such as skilled labour and specialised equipment efficiently;
- partner with other bodies, increasing prospects for spillover benefits; and
- be undertaking basic research and novel R&D (found to generate greater spillovers).

The current \$100 million expenditure threshold would be increased to \$150 million. The higher expenditure threshold would encourage large companies to spend more on their R&D in Australia.

The package of changes to the non-refundable R&DTI is estimated to provide a higher benefit to approximately 180 companies compared to the existing program. This modelling is based on tax administration data reported for the 2014-15 income year.

A \$4 million cap on cash refunds would sharpen the R&DTI's focus on additional R&D activity by ensuring that government resources are provided to those most in need. The \$4 million cap would place a reasonable constraint on the amount of refund provided to a company in a given year. Companies would retain access to the full amount of their R&D offset but, refundable amounts exceeding \$4 million would be carried forward to future years as a non-refundable tax offset for use in future years.

To be impacted by the cash refund cap of \$4 million, a company needs to spend around \$10 million on eligible R&D expenditure in an income year. R&D spending of this size cannot be sustained by tax refunds alone, resulting in the conclusion that these companies have access to alternative sources of finance. As one of the key rationales of the refundable component of the program is to support small, cash constrained SMEs, there is little policy rationale in providing unlimited Government funding to companies capable of obtaining finance through private means. As is the case with most other international jurisdictions offering cash refund for R&D activities (e.g. Denmark, Ireland and Spain), it is reasonable for an upper limit to be placed on the amount of cash benefit a company can receive in an income year.

The reforms to the refundable tax offset would also include a carve-out for clinical trials. This carve out would mean that eligible expenditure incurred on clinical trials would be exempt from the \$4 million cap. The carve-out would ensure that support is maintained for critical drug and medical device development.

Linking R&D offset rates to the company tax rate would address the expected program cost increases resulting from the proposed company tax rate reductions in a manner which avoids the need to repeatedly amend the tax law. In the absence of linking to company tax rates, in order to maintain the level of benefit available under the R&DTI, the program would need to be amended

every time the company tax rate was changed. Given the expected frequency of such changes, the linking is more efficient and provides certainty for program participants going forward.

The ISA Board would have the ability to publish 'general determinations', which would be binding on the ISA Board and pertain to the circumstances in which the Board can exercise its powers or perform its functions or duties in relation to the R&DTI. The broad scope of general determinations would assist in improving the clarity of advice provided to industry claimants, and would provide program participants with clearer guidance about eligibility requirements. Practically, this is expected to result in reduced time and money devoted to program registration and dealing with compliance activities. Clearer guidance and eligibility will also result in a reduced need for companies to engage consultants and expert advice when engaging with the program.

Amending Part IVA of the *Income Tax Assessment Act 1936*, to include both the refundable and non-refundable R&D tax offsets in the definition of a 'tax benefit' would provide the ATO with the ability to challenge contrived tax arrangements that seek to utilise R&D tax offsets.

Costs

Around 875 (45 per cent) of companies claiming the non-refundable R&D tax offset are expected to have intensities less than 2 per cent, placing these firms into the lowest R&D Premium threshold. The remaining non-refundable offset recipients (approximately 1,070) have intensities greater than 2 per cent.

Companies receiving the refundable R&D offset would see a reduction in their overall benefit amount as a result of linking to the company's tax rate.

It is estimated that a \$4 million cap would impact the cash refund values of around 20 claimants receiving the refundable offset, taking into account other elements of the package. These registrants would no longer receive a cash refund for amounts in excess of the \$4 million cap.

For companies that are impacted by the cap on cash refunds, those conducting clinical trials would still be able to receive a cash refund above \$4 million.

The Linking measure will reduce the level of benefit available to profitable SMEs from 16 per cent to 13.5 per cent. However, this measure is required to reset the level of benefit to that which was available prior to the small business company tax cuts. Profitable SMEs have in the meantime been the beneficiaries of an unintended windfall arising from this anomaly.

Unprofitable SMEs will see a reduction in their refundable benefit of 2.5 per cent. This is an acknowledged policy consequence of the Linking measure, and provides a consistent level of benefit for both profitable and unprofitable SMEs.

There are difficulties measuring the elasticities (i.e. responsiveness) of R&D expenditure incurred by smaller claimants that would allow an assessment of the likely impact of the measure on the aggregate level of R&D. While the level of benefit is being slightly reduced, the equivalent reduction in company tax rates will have more widespread positive cash flow consequences. Given the two policies will be rolled out concurrently, future analysis is also unlikely to be able to disaggregate the effects of these two policies.

Given the changes being made to the program, the feedstock, clawback and balancing adjustment rules would need to be amended to ensure they correctly reverse the tax benefit of claiming R&D in situations such as where the R&D activities are funded by other forms of government support or the results of R&D activities are sold. This may result in some minor transitional costs for taxpayers already claiming under the program.

It is expected that the regulatory impact of the changes would be moderate. The intensity calculation for companies receiving the non-refundable offset would use information from existing tax return labels. As companies already collect the required information, making an additional calculation would impose limited additional costs. The introduction of the cap on cash refunds is not expected to change the way that companies would register or claim their R&D expenditure, except for those claiming a clinical trials exemption.

Increased regulatory burdens would largely lie with companies who would benefit under changes in the program. For example, the companies in a position to benefit from the higher expenditure threshold may choose to register additional R&D activities in order to maximise their benefits under the program.

Option 3 - Net benefit

The net result is that the R&DTI would be refocused towards supporting additional high intensity R&D expenditure, reducing support for business-as-usual activities and improving the returns to the economy and to tax payers. The changes help reduce the cost of the program, delivering a save to the Budget of \$2.4 billion in fiscal terms over the forward estimates.

Under the Option 3, the regulatory burden is higher than for Option 2, however this is due to retained access for all non-refundable claimants. These companies would still be able to access a baseline level of support even if their R&D intensity is less than one or two per cent. These lower intensity companies are excluded under Option 2, and so reduce the associated regulatory costs.

The targeted reforms to the R&DTI would have minimal regulatory impact on program participants and the reforms do not exclude any companies from claiming under the R&DTI. Minor changes would be required to the registration and claims processes as a result of the changes. Record keeping requirements would remain largely unchanged, and information required to calculate a company's intensity (e.g. total expenses) is already available as part of the company tax return process. Accordingly, only a minor increase in compliance costs is expected.

The potential for companies to establish specific R&D entities for the purpose of accessing the higher R&D intensity benefits was considered during the legislation consultation process. Following stakeholder feedback, it was deemed that the risk of this occurring is low and the ATO has advised that the anti-avoidance provisions in the tax law, which are being strengthened as part of this legislative package, are sufficient to ensure the integrity of the program.

This option would result in an estimated total average annual regulatory cost for businesses of \$25.2 million:

Table 5: Regulatory burden estimate (RBE) table (Option 3)

Average annual regulatory costs (from business-as-usual)				
Change in costs (\$ million)	Business	Community organisations	Individuals	Total change in cost
Total, by sector	\$25.2	Nil	Nil	\$25.2

*Average annual impact (calculated over 10 years).

6. Consultation plan

There has been significant consultation on the reforms to the R&DTI.

The first round of public consultation occurred during the Review of the R&D Tax Incentive in early 2016. To inform their deliberations, the Review Panel conducted a program of targeted consultations with a variety of stakeholders including those from industry, the research sector, and government and tax agents. The Review consultation period began on 13 January 2016 and ended on 18 March 2016.

The Review was released publicly on 28 September 2016. To inform its response to the Review Panel's proposed recommendations, the Government announced a four week public consultation period, which was undertaken following the public release of the Review report. In addition to written submissions, the Minister for Industry, Innovation and Science convened a number of roundtables with peak industry bodies, and one-on-one meetings with targeted stakeholders and DIIS conducted multiple stakeholder forums in all states and territories to receive feedback. The written submissions are publicly available on the DIIS website at industry.gov.au.

Following the Government's announcement of reforms in the context of the 2018-19 Budget, draft legislation was released for public consultation from 29 June to 26 July 2018. In addition to written submissions, consultations included a series of face-to-face meetings with key stakeholders conducted by DIIS in consultation with the Treasury and ATO.

Consistent with the prior consultation processes, some stakeholders objected to the potential reduction of benefits under the proposed changes. However in general, feedback from this process has helped refine the final legislation with the following stakeholder suggestions being adopted:

- Amending the 'R&D premium' so that it is calculated as a portion of 'total expenses' and not 'total expenditure'. Stakeholders argued this would be easier to comply with as the information is more readily available in their accounting systems;
- Clarified the scope of the clinical trial exemption to remove ambiguity;
- Expanded the new mechanism for working out clawback and feedstock adjustments to include balancing adjustments for R&D assets, meaning a single mechanism is used for adjustments to the amounts of benefit received under the Incentive;
- Excluded clawback amounts from the income tests that apply to early stage investment companies (ESICs), to ensure the Incentive does not inadvertently impact eligibility for other Government programs; and
- Explicitly legislated a minimum 2 year delay for the ATO publishing R&DTI claimant details to help alleviate stakeholder concerns that data published soon after year end could be commercially sensitive in nature.

In addition to the above formal consultations, DIIS will continue to engage with stakeholders throughout implementation of the reforms.

7. Option selection/conclusion

The preferred policy option is to implement the targeted reforms to the R&DTI (Option 3). Option 3 would better target the R&DTI by inducing greater additionality and spillovers, while improving the integrity and sustainability of the program. Option 3 addresses the issues raised in the Review but maintains a base level of support for all R&D performing companies, and provides a greater incentive to high R&D intensity companies than that recommended by the Review (Option 2). Option 3 implements a larger annual cap on cash refunds and provides a minimum base rate of support for claimants with low R&D intensity.

Although Option 3 is expected to result in higher regulatory costs, it continues to provide support to companies that would be completely excluded from the program under Option 2. It also addresses the policy concerns with the current program, which would have persisted under Option 1. It is therefore the preferred approach to reform of the R&DTI.

8. Implementation and evaluation/review

Legislation is required to implement this proposal. The reforms to the R&DTI announced in the context of the 2018-19 Budget will apply for income years on or after 1 July 2018. As such, legislation will need to be passed by 30 June 2019 for the measures to apply to the 2018-19 year.

To support R&DTI claimants in understanding their obligations under the reformed program, the ATO and AusIndustry will issue improved guidance products for claimants. This will be augmented by the proposed changes that permit ISA to issue binding public guidance, increasing certainty for claimant's as to what is and is not eligible R&D activity under the R&DTI. Additional resourcing for the regulators will also be used to undertake greater enforcement activity, further improving the integrity of the R&DTI.

Following the passage of the legislation, the ATO and ISA will continue to undertake their client feedback processes, which assist in identifying opportunities to improve the administration of the R&DTI. Treasury and DIIS will also consider feedback from regulators and stakeholders as to how the reformed R&DTI is operating in practice.

Following the end of a financial year, there is a 16 month delay before complete registration and taxation data for that years' R&DTI registrants becomes available. This time lag means that analysing companies' behavioural responses to the proposed measures would not be possible for some time (late 2020 at the earliest). This is because a number of years of data from the reformed program would be necessary to perform a useful evaluation of the effects of any changes. Accordingly, any review performed before 2022/23 would be of limited value as the dataset would not cover a sufficient period.

Evaluations for the R&DTI are performed in consultation with DIIS's internal evaluation unit, and the results are made public at Ministerial discretion.

As discussed earlier in this document, there are longstanding challenges in evaluating program effectiveness against its objectives of additionality and spillovers. To again quote the CIE:

...there are significant difficulties in measuring additionality and spillovers arising from the R&D TI. This means that a sound quantitative estimate of the overall benefits of the scheme to the economy (or an estimate of the value that the taxpayer receives for their expenditure) will always be subject to considerable uncertainty.

It is not expected that the reformed program will assist in overcoming these data issues.

General summaries of Government support provided for business R&D will continue to be published publicly in the annual Science, Research and Innovation Budget Tables. In addition, the reforms to the R&DTI will ensure transparency of the program by publishing the names of companies, and their claim amounts, following a two year delay.